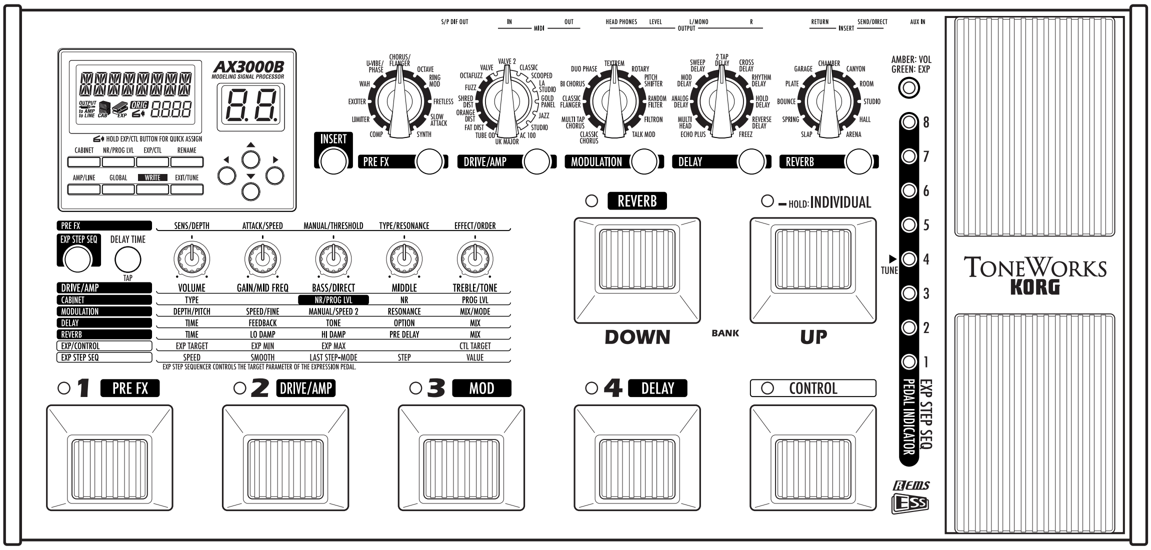
AX3000B

MODELING SIGNAL PROCESSOR

Owner's manual



REMS

TONEWORKS
KORG

E 1

Precautions

Location

Using the unit in the following locations can result in a malfunction.

- In direct sunlight
- Locations of extreme temperature or humidity
- Excessively dusty or dirty locations
- Locations of excessive vibration
- Close to magnetic fields

Power supply

Please connect the designated AC adapter to an AC outlet of the correct voltage. Do not connect it to an AC outlet of voltage other than that for which your unit is intended.

Interference with other electrical devices

Radios and televisions placed nearby may experience reception interference. Operate this unit at a suitable distance from radios and televisions.

Handling

To avoid breakage, do not apply excessive force to the switches or controls.

Care

If the exterior becomes dirty, wipe it with a clean, dry cloth. Do not use liquid cleaners such as benzene or thinner, or cleaning compounds or flammable polishes.

Keep this manual

After reading this manual, please keep it for later reference.

Keeping foreign matter out of your equipment

Never set any container with liquid in it near this equipment. If liquid gets into the equipment, it could cause a breakdown, fire, or electrical shock.
Be careful not to let metal objects get into the equipment. If something does slip into the equipment, unplug the AC adapter from the wall outlet. Then contact your nearest Korg dealer or the store where the equipment was purchased.

THE FCC REGULATION WARNING (for U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the user's authority to operate this equipment.

CE mark for European Harmonized Standards

CE mark which is attached to our company's products of AC mains operated apparatus until December 31, 1996 means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC). And, CE mark which is attached after January 1, 1997 means it conforms to EMC Directive (89/336/EEC), CE mark Directive (93/68/EEC) and Low Voltage Directive (73/23/EEC).
Also, CE mark which is attached to our company's products of Battery operated apparatus means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

Table of Contents

Introduction

WELCOME ABOARD!

Many thanks for adding the **TONEWORKS Modeling Signal Processor AX3000B** to your sonic arsenal. Whether you're playing live or recording in the studio, we're sure it'll give you countless hours of great bass tones that will feel as good as they sound!

To maximize your chances of enjoying a long and toneful relationship with your AX3000B, please read this manual at least once, and (as they say), "use the product as directed." Keep the manual for future reference after you've read it; you'll want to re-read it later at some point to pick up cool tips you may have missed the first time around.

MAIN FEATURES

- Detailed and powerful modeling sounds delivered by Korg's "REMS" modeling technology.

What is REMS ?

REMS (Resonant structure and Electronic circuit Modeling System) is KORG's proprietary sound modeling technology which precisely reproduces the complex character and nature of both acoustic and electric instruments as well as electronic circuits in real world environments. REMS emulates a wide variety of sound generation characteristics including instrument bodies, speakers & cabinets, acoustic fields, microphones, vacuum tubes, transistors, etc.

- 72 different modeling effect variations are built-in, and you can use up to seven different effects simultaneously (including noise reduction). You can also use insert effects at the same time.
- Use the effect model select knobs to instantly change your selection for each of the five effect categories (pre-effect, drive/amp, modulation, delay, reverb).
- You can connect your own external effect device(s) as an insert effect.
- A sound you create using the AX3000B's modeling effects (including the on/off status of an external effect) can be saved as a "program." Internal memory can hold 96 of your own original programs, and 32 preset programs are provided.
- There's also an Individual Mode that lets you use the foot switches to individually turn each effect on/off.
- You can assign the expression pedal to control a variety of effect parameters, as well as using it as a wah pedal or volume pedal — a great feature for live performances.
- There's a Quick Assign function that makes it easy to assign parameters to the expression pedal.

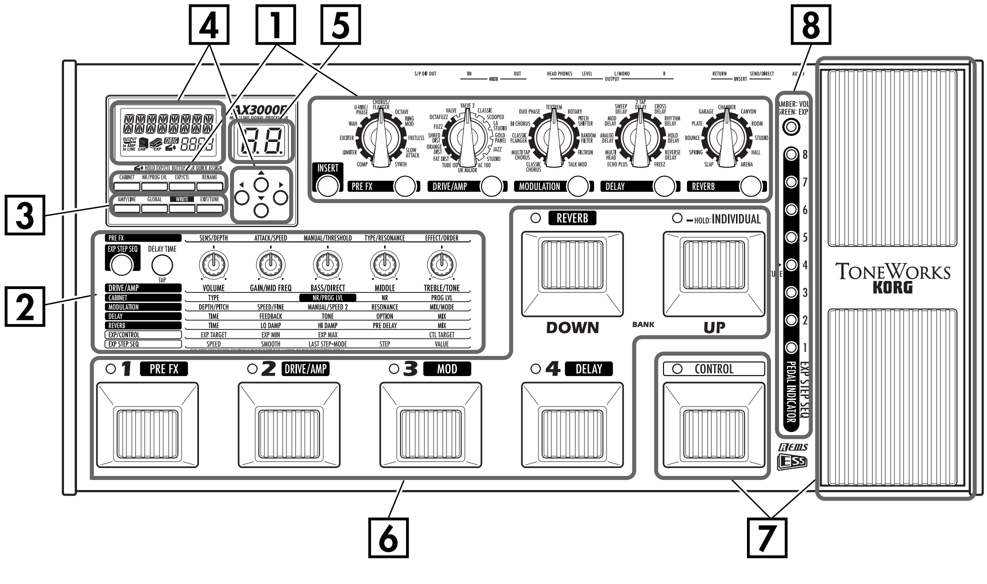
- The AX3000B features an Expression Step Sequencer (abbreviated as ESS in this manual) that provides step control of a variety of effect parameters, giving you new possibilities of sounds that were unavailable until now.
- The delayed sound can be maintained when you switch between programs that have the same delay type and TIME parameter settings. (The HOLD function of HOLD DELAY or the FREEZ function of the FREEZ effect assigned to the control switch will be cancelled at this time.) Reverb can also be maintained when you switch between programs of the same reverb type.
- The AX3000B provides a control switch that allows you to do things like set the delay time via TAP TEMPO, switch insert effects on/off, or switch the speed of a rotary speaker ... again, must-have features for live performance.
- An Auto Chromatic Tuner with a highly-visible LED indicator is built-in, letting you tune while bypassed or muted.
- AUX IN jacks let you play along with the playback from a connected audio device.
- S/P DIF optical output jack and MIDI IN/OUT jacks provide great potential for recording and expansion.
- You can use the "AX3000B Sound Editor" editor/librarian software to visually edit the AX3000B's numerous parameters, and to save programs. Contact a Korg distributor in your country for details on how to obtain this software and about its operating requirements. You can download the software from the following website, or your local distributor's website.

  *http://www.korg.com

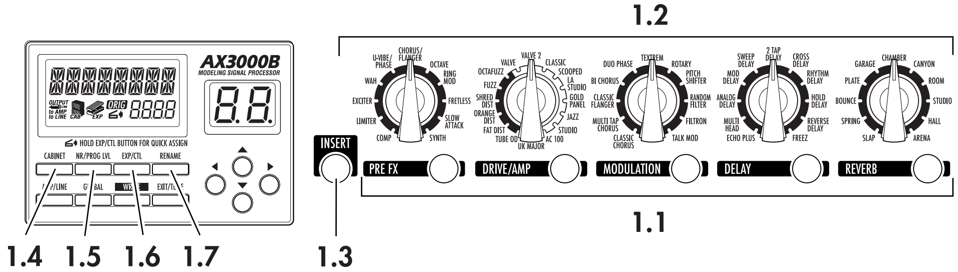
A Bassist's Guided Panel Tour

Here we're going to learn about the buttons and other controls on the AX3000B's top and rear panel.

FRONT PANEL



1 EFFECT EDIT SECTION



1.1 Effect Category buttons

Use these buttons to select the effect category you want to edit using value knobs 1–5, or to switch individual effects on/off. The button for an effect will be lit if that effect is on, blinking while that effect is being edited, or dark if that effect is turned off.

When you press a button, its LED will blink; now you can use value knobs 1–5 to edit the effect parameters of that category. If you want to turn off an effect that is currently on, press the effect category button for that effect (it will blink), and then press the button again to turn the effect off (the LED will go dark); the display will indicate "--OFF--".

1.2 Effect Model selectors

Use these to select the effect model that you want to use for each effect category. You can choose from eleven types of pre-effects, sixteen types of drive/amp models, and eleven types of modulation, delay, and reverb effects. When you operate a selector, its Effect Category button will light, and you can use value knobs 1–5 to edit its parameters.

> **NOTE:** The parameters will be initialized when you change the effect type.
>
> **NOTE:** When you change the drive/amp model type, the cabinet model will automatically change to an appropriate type.

1.3 INSERT button

This turns an insert effect on/off. The indicator will be lit if the signal input/output to an external effect device is turned on, or dark if this is turned off.

1.4 CABINET button

Use this button to turn a cabinet model on/off, or when you want to change the cabinet model type that was automatically chosen when you selected a drive/amp model. To turn the cabinet model off, press the cabinet model button to make the display indicate the cabinet model name (this means that the cabinet model is on), and then press the cabinet model button once again. The display indicates "--OFF--" and the cabinet model will be turned off.

> **NOTE:** The cabinet model is used only if the AMP/LINE setting is "Ln (LINE)" and the drive/amp model is turned ON. In this state, the cabinet model will be used if it is turned ON, and the cabinet icon CAB will appear in the LCD display.

1.5 NR/PROG LVL (Noise reduction/Program level) button

Use this button when you want to adjust the noise reduction or the level (volume) of each program.

> **HINT:** The factory program level is 5.0. For details on how to create your own sounds, refer to "Creating your own Program" on p.17.

1.6 EXP/CTL (Expression/Control) pedal assignment button

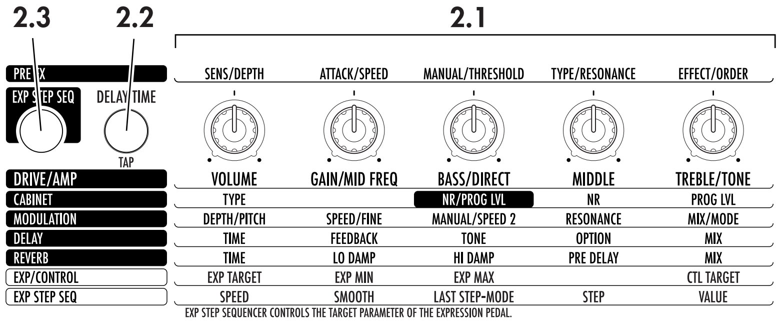
Use this button when you want to change the assignment of the expression pedal or control switch.

> **HINT:** For details, refer to "Using the expression pedal to control parameters" on p.41.

1.7 RENAME button

Use this to change the program name (p.19).
Use the ◀/▶ buttons to move between spaces (characters) in the display, and use value knob 1 or the ▲/▼ buttons to change the character at that space.

2 PARAMETER EDIT SECTION



2.1 Value knobs 1–5

Use these knobs to adjust the parameters of each effect. From the left, we refer to these as value knobs 1–5. These knobs edit the settings of the effect you've selected from an effect category button (when the button is blinking), as well as the settings for the cabinet, noise reduction, program level, expression pedal, ESS, and control switch settings. The LEDs will light to indicate the knobs that are currently active.
The knob LED will change to blinking for the parameter that you're currently operating.

HINT: For details on the parameters controlled by each knob, refer to "Explanations of the Effect Types" on p.23.

NOTE: When you're performing a RENAME or WRITE operation or making GLOBAL settings, you can use value knob 1 to change the value.

2.2 Delay Time Tap button

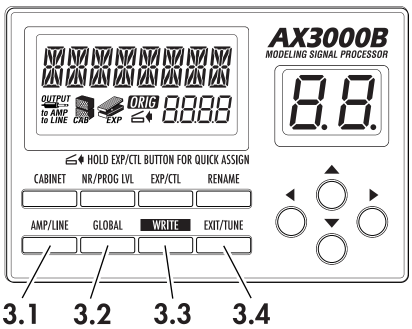
You can set the delay time by pressing this button at the desired interval.

2.3 ESS button

Use this button when you want to start or make settings for the ESS (Expression Step Sequencer).

HINT: For details, refer to "Using ESS to control a parameter" on p.47

3 THE PROGRAM WRITE/EXIT SECTION AND OTHER SETTINGS



3.1 AMP/LINE button

This button lets you make appropriate settings for the device to which your AX3000B is connected. The OUTPUT to AMP to LINE icon in the display will change depending on the destination device you've selected (p.12).

3.2 GLOBAL button

You can press the GLOBAL button and use the ◀/▶ buttons to move through the menus in the following order. After you've selected a menu item, use value knob 1 or the ▲/▼ buttons to edit the value.

MIDI CH:	MIDI channel setting	(p.51)
PCHG OUT:	Program change message output setting	(p.51)
CCHG I/O:	Control change message input/output setting	(p.51)
SYEX OUT:	System exclusive message output setting	(p.52)
DUMP CUR:	Send the current program data from the MIDI OUT jack	(p.53)
DUMP ALL:	Send all of the AX3000B's data from the MIDI OUT jack	(p.53)
DOUT LVL	Set the S/P DIF output level in a range of five levels; –12, –6, 0, +6, +12 [dB]	

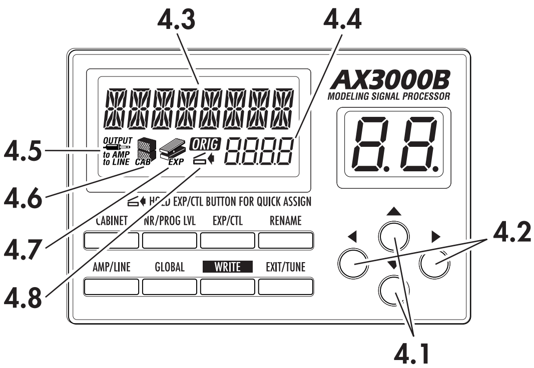
3.3 WRITE button

Use this button when you want to save the settings you've created (p.19).

3.4 EXIT/TUNE button

Use this button to cancel a "program save" operation or a setting you've made. If the name display shows a program name, pressing this button will start up the built-in Tuner. By pressing and holding down this button, you can enable or disable the Key Lock function, which disables operation of the buttons, selectors, and knobs (p.16, 21).

4 DISPLAY/CURSOR SECTION



This area displays the program name, and the name and value of the parameters you're editing in the amp or effect section.

4.1 ▲/▼ buttons

Use these to edit the value of parameters.

4.2 ◀/▶ buttons
Use these to select the parameter you want to edit, or to edit the program name.

4.3 Name display
Displays program names, effect names, or parameter names.

4.4 Value display
This indicates the value of the parameter you are editing. If the displayed parameter value matches the unedited value (i.e., the value that's stored in the program), the Original Value icon ORIG will light. If the name display shows the program name, and the program name or BANK LED are not blinking, the bank number and program number are shown in the form of "2-1" (which in this example indicates bank 2, program 1).

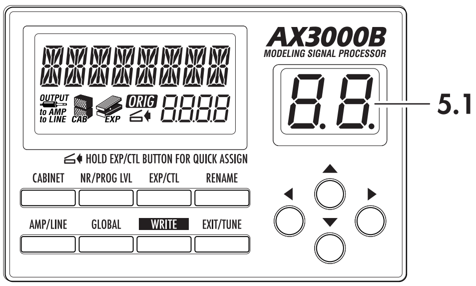
4.5 OUTPUT icon
This indicates the AX3000B's output destination setting (AMP/LINE).

4.6 CABINET icon
This will light when the Cabinet model is active.

4.7 EXP icon
This will light when the expression pedal can be used.

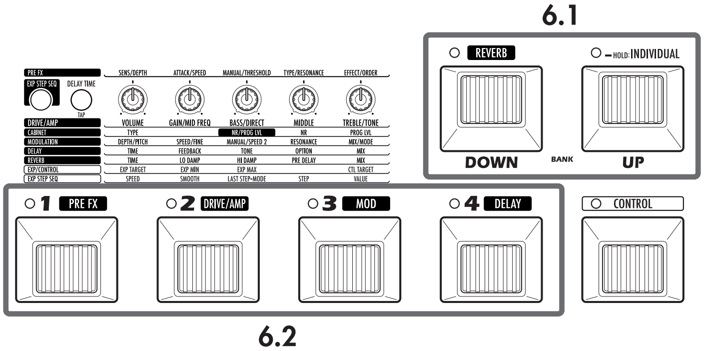
4.8 Quick Assign icon
This will light if you're operating a parameter that can be assigned to the expression pedal, indicating that the Quick Assign function is available.

5 BANK DISPLAY



5.1 Bank display
This indicates the bank number. If the Tuner is operating, it indicates the note name (p.21).

6 BANK/PROGRAM SELECT SECTION



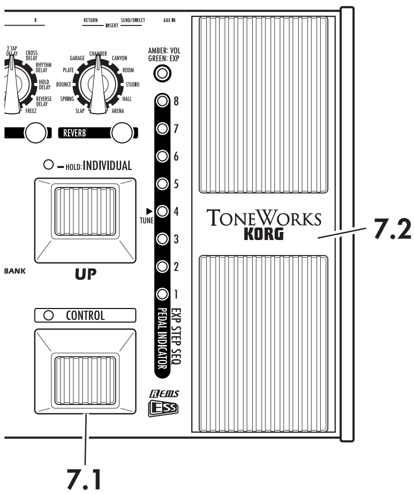
6.1 BANK UP/DOWN switches

In Program Select mode (p.15), pressing Bank Up will increment the bank, and pressing Bank Down will decrement the bank.
In Program Select mode, you can press and hold the Bank Up switch which turns on Individual mode (the LED located at the upper left of the switch will light green). In Individual mode, you can use the program select switches to turn the Pre-Effect, Drive/Amp model, Modulation effect, and Delay effect on/off individually. You can also use the Bank Down switch to turn the Reverb effect on/off.

6.2 Program Select switches, Program LEDs

Use these switches to select programs. The program LED located at the upper left of each switch will light red to indicate your selection. In Individual mode, you can use these switches to turn the Pre-Effect, Drive/Amp model, Modulation effect, and Delay effect on (LED lit green) or off individually.

7 EFFECT CONTROL SECTION



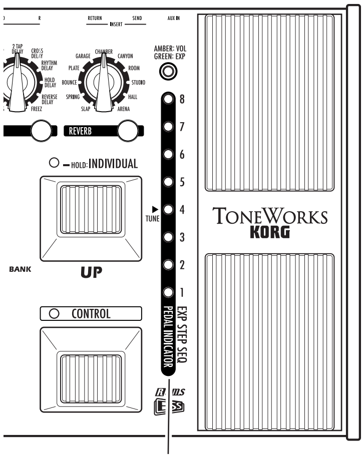
7.1 CONTROL switch

This switch controls an effect. For each program, you can assign what effect parameter this switch will control. For details, refer to “Control switch settings” on p.44.

7.2 EXP (Expression) pedal

This controls volume, wah, or another effect parameter. For each program, you can assign just what this pedal will control (p.41). When using ESS, manual control of the sequence speed or step is assigned to this pedal. By advancing this pedal forward to press the switch that’s mounted under it, you can turn the expression pedal or the effect being controlled by ESS on/off. (This switching operation is not available if the EXP pedal is controlling the volume.)

8 ESS/PEDAL INDICATOR/TUNER DISPLAY



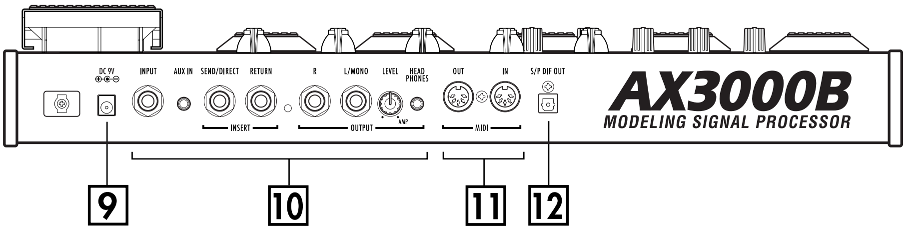
8.1

8.1 ESS/Pedal indicator/Tuner display

When you’re using ESS, this indicates the total number of steps (LED: green) and the current step (LED: red). When you’re using the expression pedal, this indicates the current position of the pedal (LED: red). When the Tuner is operating, this functions as a tuning meter (LED: red or green).

NOTE: What happens when you change programs will depend on the target that’s assigned to the expression pedal, as follows.
If the expression pedal is assigned to VOLUME, DELAY INPUT, or REVERB INPUT, or if it is assigned to the same target as in the previous program, the pedal position will be valid immediately after the program change, and the pedal indicator will light.
In other cases, the value specified within the program will be valid immediately after the program change, and the pedal indicator will be dark until you move the pedal.

REAR PANEL

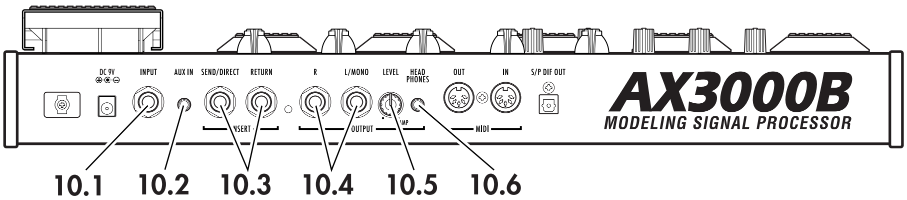


9 POWER SUPPLY

DC9V

Connect the included AC adapter here.

10 INPUTS AND OUTPUTS



10.1 INPUT jack

Connect your bass to this jack.

10.2 AUX IN jack (stereo mini)

Connect the analog output of your audio device here.

> **NOTE:** This convenient input jack lets you connect your CD/MP3 player or other audio device and play your bass along with a favorite song. Use the output volume of your audio device to adjust the playback volume.

10.3 INSERT jacks (SEND, RETURN)

You can connect external effect processors or stompboxes to these jacks.

Connect SEND to the input of your external effect device.

Connect RETURN to the output of your external effect device.

> **HINT:** The incoming sound is always output from the SEND jack.

> **HINT:** If a 1/4" phone plug is connected to the RETURN jack, the signal received at the RETURN jack will be processed if INSERT is ON. If nothing is connected to the RETURN jack, the signal received at the INPUT jack is always used.

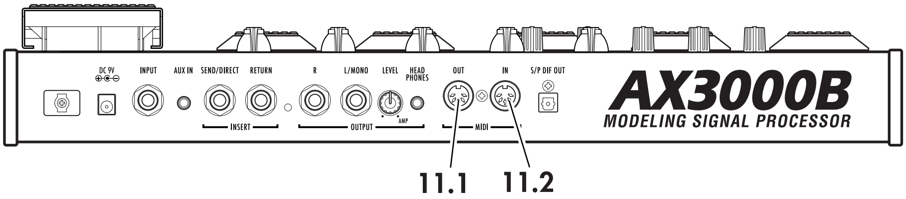
10.4 OUTPUT jacks (L/MONO, R)

These are analog output jacks (balanced/unbalanced TRS). If you're using a mono output, use the L/MONO jack.

10.5 LEVEL knob
Adjusts the output level from the OUTPUT jacks and the PHONE jack.

10.6 PHONE jack (stereo mini)
Connect your headphones to this jack.

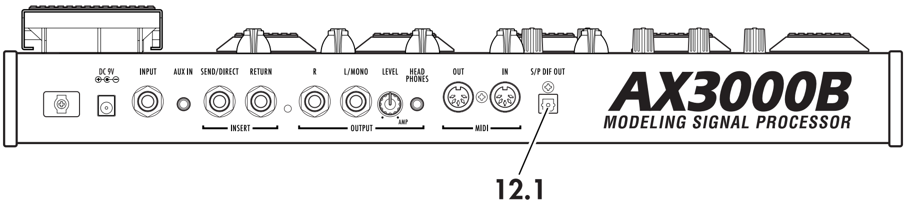
11 MIDI



11.1 MIDI OUT jack
This jack transmits MIDI data. Use it when you want to control a connected external MIDI device from your AX3000B.

11.2 MIDI IN jack
This jack receives MIDI data. Use it when you want to control your AX3000B from a connected external MIDI device.

12 S/P DIF OUT



12.1 S/P DIF OUT jack
This is an optical digital jack for S/P DIF output.

Setup

NOTE: You must turn off the power of all your equipment before you make connections. If you ignore this warning, you may damage your bass amp or speaker system, and may experience malfunctions!

OUTPUT SETTINGS

OUTPUT SELECT FUNCTION

Here's how to specify whether you're connecting the AX3000B to a bass amp or to a mixer/recorder. If you set the output select setting to "Ln (Line)," the cabinet model setting is ignored. The cabinet model setting is also ignored when the drive/amp model is OFF, and won't be affected by this setting.

1. Press the AMP/LINE button.
2. Use Value knob 1 or the ▲/▼ buttons to select the connection destination.

   AP: When connecting the AX3000B's output to an amp.

   Ln: When connecting the AX3000B's output (including S/P DIF OUT) to a mixer, recorder, or headphones.

   If you choose AP, the LCD display will show the OUTPUT icon "to AMP." If you choose Ln, the OUTPUT icon "to LINE" will appear.

   NOTE: Use the "Ln (LINE)" setting if you're connecting the AX3000B to a bass amp that has a broad frequency response, such as a bass amp with a built-in tweeter.

BASIC CONNECTIONS

1. Use audio cables to connect the AX3000B's OUTPUT L/MONO and R jacks to a mixer/recorder or bass amp (p.14). If desired, you can also connect an external effect processor. To do this simply connect SEND to the input of your external processor, and RETURN to the output of your external processor.

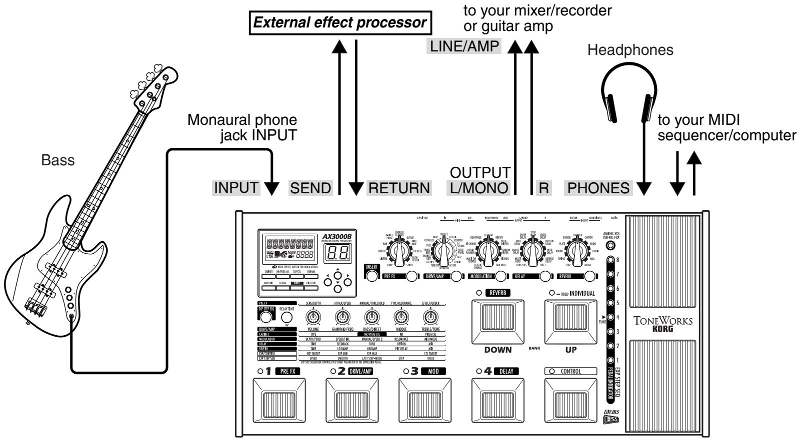
   NOTE: If you're making connections in mono, use the OUTPUT L/MONO jack.
   If you connect only the OUTPUT L/MONO jack, only the L-channel of sound will be output.

   NOTE: If you want to use headphones, plug them into the PHONES jack. If you do, signal from the OUTPUT jack(s) will no longer be heard.

2. Turn the LEVEL knob located on the rear panel of AX3000B all the way toward the left (as seen from the rear), setting the volume to 0.
3. Plug your bass into the rear panel INPUT jack.
4. Connect the included AC adaptor to the rear panel DC9V power inlet, and then connect the plug to an AC outlet to turn on the power.

5. To adjust the volume, turn up your amp or mixer and the AX3000B's rear panel LEVEL knob to a desired level.

NOTE: Use the GLOBAL menu setting "DOUT LVL" to adjust the S/P DIF OUT output level.

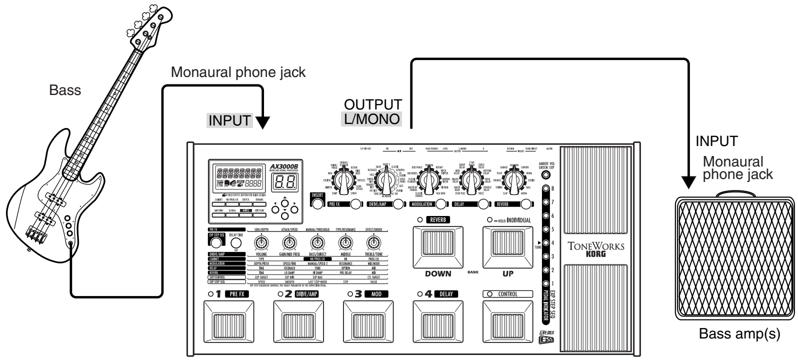


AX3000B

Example of connection to a bass amp (or amps)

- If you want to connect the AX3000B to your bass amps, connect the OUTPUT L/MONO and R jacks to the inputs of your amps. Be sure to select the appropriate connection (p.12).

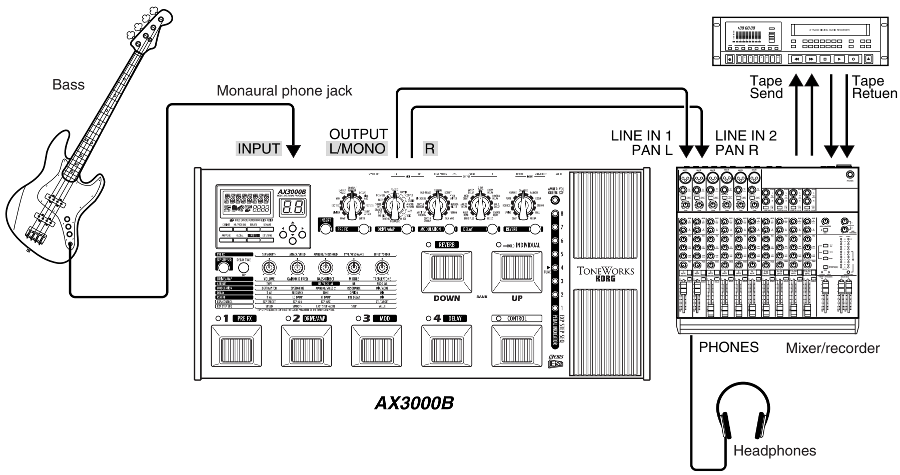
HINT: If you're connecting the AX3000B directly before your combo amp or head, set the rear panel LEVEL knob to the maximum position.



AX3000B

EXAMPLE OF CONNECTIONS TO A MIXER OR RECORDER

- When using the AX3000B for direct-line recording, connect the OUTPUT L/MONO and R jacks to the input jacks of your mixer or recorder. Be sure to select the appropriate connection (p.12).



USING THE AX3000B WITH A MIDI DEVICE OR COMPUTER

By using MIDI you can control the AX3000B from a sequencer or control an external MIDI device from the AX3000B. You can also save the AX3000B's programs on a sequencer or MIDI data filer that is able to transmit and receive MIDI exclusive data, and then load the program data back into the AX3000B when desired.

HINT: For details on MIDI-related connections, refer to "Connecting a MIDI Device or Computer" on p.50.

Playing the AX3000B

PROGRAM SELECT MODE

(LED at the upper left of the Bank Up switch is not lit)

Settings for each effect, the expression pedal, ESS, and other functions can be given a name and stored in the AX3000B as a “program.” The AX3000B can hold 96 programs (24 banks x 4 programs in each bank), and all of these programs are rewritable. When the AX3000B is shipped from the factory, banks 1–8 contain 32 preset programs. In Program Select mode you can switch between various types of sounds by selecting the desired program.

> **HINT:** Banks 9–16 and 17–24 contain the same preset programs as banks 1–8.

SELECTING A PROGRAM

As an example, here’s how to select program 2-3 (bank 2, program 3).

1. Make sure that your AX3000B is in Program Select mode.
   If the LED located at the upper left of the Bank Up switch is lit green, Individual Mode is selected. Press the Bank Up switch to choose Program Select mode.
   If the bank display shows something other than a bank (1–24), or if the bank display is blinking, press the EXIT/TUNER button to choose Program Select mode.
2. Press the Bank Up or Bank Down switch to select bank 2. When you’re selecting a bank, the bank number will blink in the bank display.
3. Press the program select 3 switch.

   Program 2-3 will be displayed instantly. The program select 3 switch LED will light, and the bank number will also change and stay lit.

   > **HINT:** When you’ve selected the Bank but not the Program, the previously-selected program is still active. So if you’re playing live and your next program change requires you to switch to a different bank, you can select that bank ahead of time, ensuring a timely, seamless change.

INDIVIDUAL MODE

(LED at the upper left of the Bank Up switch is lit green)

In this mode you can individually turn each effect on/off just as if you were using a collection of stompboxes. You can select Individual mode from any program.

Operations in Individual mode

As an example, here's how to switch the pre-effect and reverb on/off while you're playing.

1. If the LED at the upper left of the BANK UP pedal is dark, you're in Program Select mode. Press and hold the BANK UP pedal for about one second to enter Individual mode. At this time the LED at the upper left of the BANK UP pedal will light green. Program LEDs 1–4 and the LED at the upper left of the Bank Down switch will be lit green or dark to indicate the on/off status of the pre-effect, drive/amp model, modulation effect, delay effect, and reverb effect respectively.
2. Press the program select switch 1 to turn the pre-effect on/off. The LED 1 lit/dark state indicates the on/off status of the pre-effect.
3. Press the Bank Down switch to turn the reverb on/off. The LED at the upper left of the Bank Down switch will be lit or dark to indicate the reverb's on/off state.
4. To exit Individual mode, press the BANK UP pedal. The LED at the upper left of the BANK UP pedal will go dark.

Activating or deactivating the Key Lock function

Here's how you can use the Key Lock function to disable the AX3000B's buttons, selectors, and knobs so they can't be accidentally changed during a live performance.

> **NOTE:** While the Key Lock function is activated, you won't be able to operate any controls except for the switches, pedals and the EXIT button.
>
> **NOTE:** The Key Lock setting is cancelled when you turn off the power; it will be disabled when you turn on the power once again.

Activating the Key Lock function

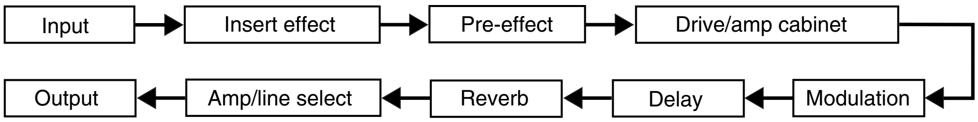
1. If the name display shows anything other than a program name, or if the characters of the program name are blinking, press the EXIT button.
2. With the program name shown in the name display, press and hold the EXIT button for at least one second.
   The name display will indicate "KEY LOCK" for one second.

Deactivating the Key Lock function

1. If the name display shows anything other than a program name, press the EXIT button.
2. Press and hold the EXIT button for at least one second.
   The name display will indicate "LOCK OFF" for one second, and the Key Lock function will be disabled.

Creating and Storing your own Programs

SIGNAL PATH



There are two ways you can do this; by "tweaking an existing program" or by "starting from scratch."

CREATING YOUR OWN PROGRAM

If you want to tweak an existing program, select one that's close to the sound you want. Set the CATEGORY select switches to the amp, cabinet and effects you want to use, and use value knobs 1–5 to adjust the sound.
For example, you might start with an old-style bass sound that has rich mid- and low-frequencies, and create a more contemporary "scooped" bass sound by lowering the mids and boosting the highs.

Now here's how to create your own program from scratch.

> **NOTE:** Before you proceed, you must first perform the setup procedure described on p.12 to correctly specify the type of equipment to which your AX3000B is connected.

1. Select any program (p.15).

   > **HINT:** It doesn't matter which program you select, because we're starting from scratch.

2. In the PRE FX, MODULATION, DELAY, or REVERB section, press all category select switches that are lit two times. This will turn off (bypass) all effects except the amp and cabinet models.
3. Use the DRIVE/AMP selector to select the drive/amp model you want to use.
4. Use value knobs 1–5 to adjust the parameters of the drive/amp model as desired.

   > **HINT:** Adjust the VOLUME so that there's not too much difference in volume when the drive/amp model is switched on/off. If VOLUME is raised excessively, distortion may occur in the effects located after drive/amp.

5. When you choose an amp model, the appropriate cabinet model will be selected automatically. If you want to use the cabinet model (for example if the AX3000B is connected to a mixer or recorder), press the CABINET button to turn it on. If you use the cabinet model, make sure to choose the correct Out-

put Select setting (p.12). If you want to change the cabinet model, turn value knob 1. If you don't want to use a cabinet model, press the CABINET button once again to turn it off; the CAB icon will disappear from the LCD display.

6. Press the NR/PROG LVL button, and adjust NR (value knob 4) so that you don't hear noise when you're not playing your bass. The effect will become stronger as you increase the noise reduction setting (0.2, 0.4–10.0). If this is off, no noise reduction is applied.

   HINT: Depending on the bass you're using, raising the noise reduction excessively may cause notes to be cut off prematurely or to be delayed. Adjust the setting so that your playing doesn't feel unnatural.

7. In each section, choose the effect you want to use. For example if you want to add spring reverb, use the REVERB selector to select SPRING.

   HINT: At this time, the reverb model will automatically be turned on, and the LEDs below the value knobs for each reverb parameter will light. For example, the parameters for SPRING are TIME, LO DAMP, HI DAMP, PRE DLY, and MIX, which are controlled by value knobs 1–5 respectively.

8. To adjust the reverb mix amount, use value knob 5 which controls the MIX parameter.
   In the same way for PRE FX, MODULATION, and DELAY effects, use the selector to choose an effect and the value knobs to adjust the parameters.

9. If you want to use an external device that's connected to the insert effect jacks, press the INSERT switch to turn on the signal route to your external device.

   HINT: In some cases, it may be easier to adjust PRE FX or an insert effect while listening to the original sound unprocessed by the modulation, delay, and reverb effects. When using PRE FX or an insert effect, make the desired amp and cabinet settings first, and then adjust your PRE FX or insert effect settings before the remaining effects.

   NOTE: For some models, the name of the parameter will differ from the names printed in the parameter lines of the edit section. The actual name is shown in the display when you turn the value knob. For details on the parameters, refer to "Explanations of the Effect Types" on p.23.

10. Press the NR/PROG LVL button, and adjust PROG LVL (value knob 5) so that the volume is consistent with other programs. Some effect settings may cause clipping (distortion) to occur, so lower the PROG LVL if this happens.

    NOTE: The factory program level setting is 5.0.

11. If you want to continue making adjustments, simply press the select button for the model you want to edit, and turn the value knobs.

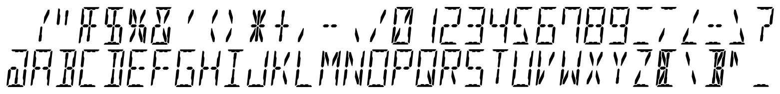
NAMING A PROGRAM (RENAME)

Here's how you can name a program.

> **NOTE:** The program name is saved as part of each program. If you switch to a different program or turn off the power before you save, your settings will be lost.

1. Press the RENAME button.
2. Use the ◀/▶ buttons to move the cursor to the character you want to change (the selected character blinks), and use value knob 1 or the ▲/▼ buttons to change the character.

   You can use the following characters.



3. Repeat step 2 to finish entering a name for your program.
4. When you've finished entering a name, press the EXIT button to return to the mode you were in.

STORING A PROGRAM

When your tweaking has resulted in a sound you're happy with, store (write) it!

1. Press the WRITE button.

   The name display shows "*WRITE*" and the bank display and program LEDs 1–4 will blink.
2. Use value knob 1 or the ▲/▼ buttons to select the bank you want to use, and use the ◀/▶ buttons to select the destination program 1–4.

   For example if you want to store your program in 9-1 (bank 9, program 1), use value knob 1 or the ▲/▼ buttons to make the bank display show "9," and then use the ◀/▶ buttons to make the program 1 switch LED blink.

   > **HINT:** You can also select the store-destination program by using the BANK UP/DOWN switches or the program 1–4 select switches.
3. Press the WRITE button once again.
   The program will be saved, the name display will indicate "COMPLETE," and you will return to Program Select mode.

   > **NOTE:** The program writes over the previous contents of that bank/program. The program that previously occupied the number you selected in step 2 will be erased.

   > **NOTE:** If you decide not to store your new program, press the EXIT button to cancel the procedure.

   > **NOTE:** If you switch to a different program or turn off the power without storing the program you edited, your changes will be lost.

RESTORING A SETTING TO ITS ORIGINAL VALUE (ORIGINAL VALUE)

The Original Value icon ORIG in the value display gives you a way to find out the parameter values that are stored in a program.
When you are using a knob or button to change the value of a parameter, the ORIG (original value) icon ORIG will appear when the value you are adjusting matches the "original value" stored in the program.

> **HINT:** So, you're flipping through the programs on your new AX3000B, and you come across one you really like. It's easy to find out exactly what settings are dialed in to get such an awesome tone — just use this Original Value display feature!

Tuner (Bypass, Mute)

For your convenience, the AX3000B contains an Automatic Chromatic Tuner. The frequency of the middle “A” reference pitch can be adjusted (calibrated) over a range of 438 Hz–445 Hz.
The Bypass (all effects turned off, including noise reduction) and Mute functions are useful when you need to make settings on your bass amp, tune your instrument, or swap bass during a live performance. To activate Bypass or Mute, make sure you’re in Program Select mode and proceed as follows.

To activate Bypass
Press and hold down the program select switch of the currently selected program for about 0.5 seconds; all effects will be bypassed. The program LED will blink, and the name display will show “BYPASS” for one second.

To activate Mute
Press and hold down the program select switch of the currently selected program for about 1.5 seconds; the output will be muted. The program LED will blink rapidly, and the name display will show “MUTE” for one second.

In either case, the Auto Chromatic Tuner will be activated. To defeat Bypass or Mute, press any desired program select switch and you will return to Program mode.

TUNING PROCEDURE

1. To activate the Auto Chromatic Tuner, you can either activate Bypass or Mute, or press the EXIT/TUNE button while the display shows the program name. If the display does not show the program name, press the EXIT/TUNE button to make the program name appear, and then press the EXIT/TUNE button once again.

> **HINT:** If you want to tune during a live performance, it’s a good idea to tune while Muted.

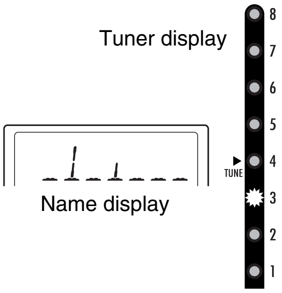
2. Play a string on your connected bass, and the closest note name will appear in the bank display. Note names are shown as follows.

C C# D D# E F F# G G# A A# B

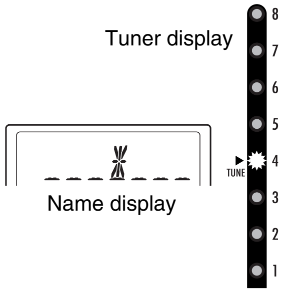


3. Tune your bass while watching the tuner display or the meter in the name display.

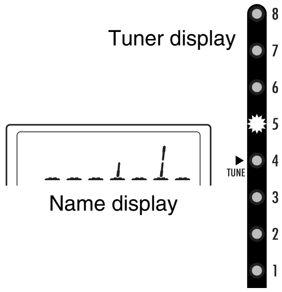
The pitch is flat



The pitch is correct



The pitch is sharp



4. When you've finished tuning, press the EXIT/TUNE button once again or press any desired program select switch.

   HINT: If you exit the Tuner by pressing a program select switch, this will also switch to the program you selected.

Calibrating the Tuner

When you switch the AX3000B on, the built-in tuner is automatically calibrated to A=440 Hz (a.k.a. "concert pitch"). If desired, you can recalibrate the tuner in the range of A = 438 Hz–445 Hz.

- While the tuner is active, the value display shows the frequency of the reference pitch. You can use the ▲/▼ buttons to calibrate this in the range of 438 Hz–445 Hz.

   HINT: If you've recalibrated the tuner, remember that the setting will be automatically reset to 440 Hz the next time you turn your AX3000B on.

Explanations of the Effect Types

This section explains the AX3000B's sixteen drive/amp models and eleven pre-effects, cabinet models, modulation, delay, and reverb effects.

A. DRIVE/AMP MODELS

The drive/amp model you select here will change the character of the tone controls and their placement within the circuitry, producing the response that's unique to each model. This choice also selects an appropriate cabinet model.

* : This indicates a parameter that you can control from the expression pedal.

DRIVE MODELS

This provides six types of popular drive pedal, tuned for bass. With the exception of SHRED DIST, a DIRECT parameter has been added to each of these.

1. TUBE OD

This models an overdrive pedal housed in a garish, "seasick green" box, that is considered an all-time classic due to the wonderfully warm tones it produces.

[1]	"VOLUME"	0.0–10.0	*	Adjusts the volume.
[2]	"GAIN"	0.0–10.0	*	Adjusts the gain.
[3]	"DIRECT"	0.0–10.0	*	Adjusts the volume of the direct signal.
[5]	"TONE"	0.0–10.0	*	Adjusts the tone.

2. FAT DIST

This models a pedal named after one of the most disliked rodents to ever walk the planet! The result is a smooth distortion rich in harmonics.

The parameters are the same as for 1. TUBE OD.

3. ORANGE DIST (OR DIST)

This models a classic distortion unit manufactured in Japan and packaged in an orange box.

The parameters are the same as for 1. TUBE OD.

4. SHRED DIST (SHRED DS)

This distortion resembles the sound produced by a large amp stack.

[1]	"VOLUME"	0.0–10.0	*	Adjusts the volume.
[2]	"GAIN"	0.0–10.0	*	Adjusts the gain.
[3]	"BASS"	0.0–10.0		Adjusts the low-frequency tone.
[4]	"MIDDLE"	0.0–10.0		Adjusts the mid-frequency tone.

[5]	"TREBLE"	0.0–10.0	Adjusts the high-frequency tone.

5. FUZZ

Retro, rude 'n' raw ... the name says it all.

The parameters are the same as for 1. TUBE OD.

6. OCTAFUZZ

This models a fuzz unit legendary for its savagely aggressive distortion. A pitch one octave above will be added if you turn down the tone and play above the twelfth fret.

The parameters are the same as for 1. TUBE OD.

AMP MODELS

7. VALVE

A tube amp with the ULTRA LO switch turned ON (recommended cabinet: CLS8x10)

[1]	"VOLUME"	0.0–10.0	*	Adjusts the volume.
[2]	"MID FREQ"	1–5		Adjusts the frequency of the mid-range.
[3]	"BASS"	-10.0–10.0		Adjusts the low-frequency tone.
[4]	"MIDDLE"	-10.0–10.0		Adjusts the mid-frequency tone.
[5]	"TREBLE"	-10.0–10.0		Adjusts the high-frequency tone.

8. VALVE2

A tube amp that's ideal for rock (recommended cabinet: CLS8x10)

The parameters are the same as for 7. VALVE.

9. CLASSIC

A tube amp whose basic character changes according to the setting of the value dial (recommended cabinet: COMBI)

The parameters are the same as for 7. VALVE.

10. SCOOPED

A typical amp for the sound of the 80's (recommended cabinet: MTL4x10)

The parameters are the same as for 7. VALVE.

11. LA STUDIO (LA STUD)

A typical amp for the LA sound (recommended cabinet: LA 4x10, LA 1x18)

The parameters are the same as for 7. VALVE.

12. GOLD PANEL (GOLD PNL)

A modern amp with a distinctive gold panel, noted for its clean sound (recommended cabinet: MDN4x10)

The parameters are the same as for 7. VALVE.

13. JAZZ

A combo amp loved by jazz bassists (recommended cabinet: JAZ1x15)

The parameters are the same as for 7. VALVE.

14. STUDIO

A tube combo amp ideal for the Motown sound (recommended cabinet: STU1x15)

Parameters

[1]	"VOLUME"	0.0–10.0	*	Adjusts the volume.
[2]	"GAIN"	0.0–10.0	*	Adjusts the gain.
[3]	"BASS"	-10.0–10.0		Adjusts the low-frequency tone.
[4]	"MIDDLE"	-10.0–10.0		Adjusts the mid-frequency tone.
[5]	"TREBLE"	-10.0–10.0		Adjusts the high-frequency tone.

15. AC100

A 100 watt tube amp manufactured by Vox (recommended cabinet: AC 2x15)

[1]	"VOLUME"	0.0–10.0	*	Adjusts the volume.
[2]	"GAIN"	0.0–10.0	*	Adjusts the gain.
[3]	"BASS"	0.0–10.0		Adjusts the low-frequency tone.
[4]	"MIDDLE"	0.0–10.0		Adjusts the mid-frequency tone.
[5]	"TREBLE"	0.0–10.0		Adjusts the high-frequency tone.

16. UK MAJOR

A 200 watt tube amp made in the UK (recommended cabinet: UK 4x15, UK 4x12)

The parameters are the same as for 15. AC100.

B. CABINET MODELS

The cabinet models are associated with the drive/amp models.
They will have an effect only if the drive/amp model is turned on. When you change the type of drive/amp model, an appropriate cabinet model is selected automatically.

You can change the cabinet model by pressing the CABINET button and turning value knob 1. If you don't want to use the cabinet model, press the CABINET switch twice to turn it off. The cabinet icon will disappear from the LCD display.

NOTE: The cabinet model is ignored if you've selected Amp ("AP") as the connection destination setting (p.12).

1. CLASSIC 8x10 (CLS 8x10)

A classic cabinet model with eight 10-inch speakers.

2. MODERN 4x10 (MDR 4x10)

A modern cabinet model with four 10-inch speakers.

3. LA 4x10

A model of the “LA sound” with four 10-inch speakers.

4. METAL 4x10 (MTL 4x10)

Models a cabinet with aluminum-coned four 10-inch speakers.

5. UK 4x12

Models a UK-made cabinet with four 12-inch speakers.

6. STUDIO 1x15 (STUD 1x15)

A model of a studio/combo cabinet with one 15-inch speaker.

7. JAZZ 1x15

Models a jazz/combo cabinet with one 15-inch speaker.

8. AC 2x15

A cabinet model for the AC100 with two 15-inch speakers.

9. UK 4x15

Models a UK-made cabinet with four 15-inch speakers.

10. LA 1x18

A model of the “LA sound” with one 18-inch speaker.

11. COMBI

Models a combination of one 12-inch speaker and one 18-inch speaker.

C. PRE EFFECT

The pre-effect is located in front of the drive/amp model.

* : This symbol indicates a parameter that you can control from the expression pedal.

1. COMP

The COMP effect is ideal when you want to play smooth and clean phrases at a consistent volume, or when you want more sustain. It models a compressor pedal that was popular for its percussive clean sound.

[1]	"SENS"	1.0–10.0	*	Adjusts the sensitivity. Turn the knob toward the right to increase the amount of compression and sustain.
[5]	"LEVEL"	0.0–10.0	*	Adjusts the output level.

2. LIMITER

This models an effect that maintains a consistent level for the input signal volume. While it is similar to a compressor, a limiter applies compression only to the sounds that exceed a specified level. Since raising the RATIO or lowering the THRESHOLD will lower the overall level, you should use the LEVEL parameter to compensate the level appropriately.

[1]	"RATIO"	0.0–10.0	*	Increasing the value will apply more compression.
[2]	"ATTACK"	0.0–10.0	*	Increasing the value will cause compression to apply more slowly.
[3]	"THRESHLD"	1.0–10.0		Compression will apply when the signal exceeds the threshold level you specify here.
[5]	"LEVEL"	0.0–10.0	*	Output level.

3. EXCITER

This models an effect that adds a brilliant high range to the sound. You can choose from two types; a conventional exciter that always adds the high range, or a "dynamic exciter" unique to ToneWorks which applies the exciter according to the volume of the input (especially good on slapped bass playing).

[3]	"FREQ"	1.0–10.0	*	The frequency at which the exciter is applied.
[4]	"TYPE"			Selects the type of exciter.
		1 (Normal):		Normal type
		2 (Dyna):		Dynamic type
[5]	"EFFECT"	0.0–10.0	*	Effect level.

Effect Type

CABINET

PRE EFFECT

4. WAH

This models a wah pedal with a white body, designed for bass and featuring adjustable resonance. Raising the RESO may cause distortion. You can lower the TRIM parameter until distortion no longer occurs.

[1]	"TRIM"	1.0–10.0		Trim (adjusts the level appropriately for the setting of the RESO parameter).
[2]	"OPEN"	1.0–10.0		Adjusts the maximum value for the open position of the wah.
[3]	"MANUAL"	1.0–10.0	*	Adjusts how far the wah is open.
[4]	"RESO"	0.0–10.0	*	Adjusts the amount of resonance.
[5]	"ORDER"			Selects the connection order.
		PrE(PRE):		The wah is connected before the DRIVE/ AMP model.
		PoS(POST):		The wah is connected after the DRIVE/AMP model.

HINT: When you select WAH, the expression pedal is automatically assigned to "MANUAL."

5. U-VIBE/PHASE (VIB/PHAS)

This lets you select one of three models; a famous phase/vibrato effect with a pedal, a wide-range four-stage phaser that was made in Denmark and packaged in a black box, and a popular four-stage phaser that came in a banana-colored box. Use the TYPE to select the model.

[1]	"DEPTH"	0.0–10.0	*	Adjusts the vibrato/modulation depth.
[2]	"SPEED"	0.1–10.0 [Hz]	*	Adjusts the vibrato/modulation speed.
[3]	"MANUAL"	1.0–10.0	*	Adjusts the center frequency of the sweep. MANUAL has no effect if DEPTH is set to 10.0.
[4]	"TYPE"			Selects the type.
		U-1:		U-VIBE set to Vibrato mode.
		U-2:		U-VIBE set to Chorus mode.
		Or:		Models the popular four-stage phaser.
		bL:		Models the Danish phaser.
[5]	"ORDER"			Selects the connection order.
		PrE(PRE):		The effect is connected before the DRIVE/ AMP model.
		PoS(POST):		The effect is connected after the DRIVE/ AMP model.

HINT: If you assign the Speed to be controlled by the expression pedal, you'll be able to control the vibrato speed just as on the original phase/vibrato unit with pedal that's being modeled.

6. CHORUS/FLANGER (CHO/FLNG)

This is a chorus/flanger unit with a standard circuit structure.

[1]	"DEPTH"	0.0–10.0	* Adjusts the modulation depth.
[2]	"SPEED"	0.1–10.0 [Hz]	* Adjusts the modulation speed.
[3]	"MANUAL"	1.0–10.0	* Adjusts the center frequency of the sweep. MANUAL has no effect if DEPTH is set to 10.
[4]	"RESO"	0.0–10.0	* Adjusts the amount of resonance.

7. OCTAVE

This models a pedal that generates a pitch one octave below the original input, mixing it with the original sound to add thickness.

[4]	"DIRECT"	0.0–10.0	* Adjusts the mix level of the original sound.
[5]	"EFFECT"	0.0–10.0	* Adjusts the mix level of the note one octave below.

HINT: This type of effect only works with single notes; chords will confuse it.

8. RING MOD

This is a ring modulator; an effect that uses an oscillator to generate a sine wave which is then multiplied with the signal from your bass to produce new harmonics. If you assign the OSCFREQ control to the expression pedal, you'll be able to control the sound in unique ways while you perform.

[2]	"FILTER"	1.0–10.0	* Adjusts the filter cutoff frequency.
[3]	"OSCFREQ"	0.0–10.0	* Adjusts the oscillator frequency.
[4]	"DIRECT"	0.0–10.0	* Adjusts the mix level of the original sound.
[5]	"EFFECT"	0.0–10.0	* Adjusts the mix level of the effect sound.

9. FRETLESS

This effect transforms the sound of a fretted bass into that of a fretless bass.

[1]	"DEPTH"	0.0–10.0	* Adjusts the degree of "fretlessness."

HINT: This effect is designed for single-note playing. The sound may be muddy if you play a chord.

10. SLOW ATTACK (SLOWATK)

This models a "slow attack" effect that slows down the attack of the bass to create a violin-like impression.

[2]	"ATTACK"	0.0–10.0	* Adjusts how the attack is modified.

11. SYNTH

This models a bass synth. An algorithm unique to ToneWorks is used to simulate an analog synthesizer sound with a smoothly tracking envelope filter.

[1]	"DPTH/POL"	-10.0–10.0		Adjusts the depth of the envelope filter (left half is negative motion, right half is positive motion).
[2]	"ATTACK"	0.0–10.0	*	Adjusts the attack of the envelope filter.
[3]	"WAVE"	0.0–10.0	*	Synth waveform. The available choices model a variety from an ordinary sawtooth waveform to a sawtooth waveform one octave below.
[4]	"RESO"	0.0–10.0	*	Adjusts the resonance of the envelope filter.
[5]	"MIX"	0.0–10.0	*	Adjusts the mix balance between the original sound and the synth sound.

HINT: This effect is designed for single-note playing. The sound may be muddy if you play a chord.

HINT: The sound may be distorted depending on your settings and on how this effect is combined with other effects. If so, you should lower the DRIVE/AMP [VOLUME] or the [PROG LVL] settings.

HINT: If you want to produce the overtone structure typical of a synthesizer, it is sometimes best to turn off the CABINET model.

D. MOD (MODULATION) EFFECTS

Here you can select one of 11 modulation-type effects.

*: This indicates a parameter that you can control from the expression pedal.

1. CLASSIC CHORUS (CL CHORS)

This models a famous chorus unit with two modes; chorus and vibrato.

[1]	"DEPTH"	0.0–10.0	*	Adjusts the modulation depth.
[2]	"SPEED"	0.1–10.0[Hz]	*	Adjusts the modulation speed.
[3]	"MANUAL"	1.0–10.0	*	Adjusts the center frequency of the sweep. If DEPTH is set to 10, MANUAL will not function.
[5]	"MODE"			Selects the output mode.
		1:		Mono output.
		2:		Stereo mode in which the effect is panned right, and the dry sound panned left.
		3:		Vibrato mode, in which only the effected sound is output. Setting MANUAL to 10 will minimize the delay of the output.

2. MULTI TAP CHORUS (MT CHORS)

This is a chorus with independent taps for left/center/right, adding depth and spaciousness to your sound.

[1] "DEPTH"	0.0–10.0	*	Adjusts the modulation depth.
[2] "SPEED"	0.1–10.0[Hz]	*	Adjusts the modulation speed.
[3] "TIME"	0.0–10.0		Adjusts the delay time.
[5] "MIX"	0.0–10.0	*	Adjusts the mix level of the effect.

3. CLASSIC FLANGER (CL FLANG)

This models a classic analog flanger.

[1] "DEPTH"	0.0–10.0	*	Adjusts the modulation depth.
[2] "SPEED"	0.1–10.0[Hz]	*	Adjusts the modulation speed.
[3] "MANUAL"	1.0–10.0	*	Adjusts the center frequency of the sweep. If DEPTH is set to 10, MANUAL will not function.
[4] "RESO"	0.0–10.0	*	Adjusts the amount of resonance.
[5] "MIX"	0.0–10.0	*	Adjusts the mix amount of the effect.
CONTROL switch FLN TRIG			If you set the FLN TRIG: CONTROL switch setting to "FLN TRIG," the LFO will be reset to the position specified by OFFSET whenever you operate the switch. (p.44 Control switch settings)

4. BI CHORUS (BI CHORS)

This is a chorus model unique to the AX3000B. It provides two chorus units, CHORUS 1 and CHORUS 2, and lets you connect the two units not only in series or in parallel, but also to synchronize or de-synchronize the two LFOs. It produces a variety of tones that cover a range from wonderfully spacious sounds to bizarre flanger-like sounds with complex modulation.

[1] "DEPTH"	0.0–10.0	*	Adjusts the modulation depth of CHORUS 1/2.
[2] "SPEED 1"	0.1–10.0[Hz]	*	Adjusts the modulation speed of CHORUS 1.
[3] "SPEED 2"	0.1–10.0[Hz]	*	Adjusts the modulation speed of CHORUS 2.

NOTE: This will not function if MODE is set to P2 or P3.

[4] "RESO"	0.0–10.0	*	Adjusts the amount of resonance for CHORUS 1/2.
[5] "MODE"			Specifies the connection and LFO for CHORUS 1/2.
	S:		CHORUS 1/2 are connected in series.
	P1:		CHORUS 1/2 are connected in parallel.
	P2:		CHORUS 1/2 are connected in parallel, and their LFOs are synchronized.

	P3:		CHORUS 1/2 are connected in parallel, and their LFOs are synchronized in opposite phase (Stereo mode).

NOTE: If P2 or P3 is selected, the speed is adjusted by the SPEED 1 (value knob 2).

5. DUO PHASE (DUO PHAS)

This is an amazing phaser that provides two six-stage phasers; PHASER 1 and PHASER 2. They can be connected in series (to make a pseudo-twelve-stage phaser!) or in parallel, and you can also synchronize or de-synchronize the two LFOs.

[1] "DEPTH"	0.0–10.0	*	Adjusts the modulation depth of PHASER 1/2.
[2] "SPEED 1"	0.1–10.0[Hz]	*	Adjusts the modulation speed of PHASER 1.
[3] "SPEED 2"	0.1–10.0[Hz]	*	Adjusts the modulation speed of PHASER 2.

NOTE: This will not function if MODE is set to S2, P2, or P3.

[4] "RESO"	0.0–10.0	*	Adjusts the amount of resonance for PHASER 1/2.
[5] "MODE"			Specifies the connection and LFO for PHASER 1/2.
	S1:		PHASER 1/2 are connected in series.
	S2:		PHASER 1/2 are connected in series and their LFOs are synchronized to create a pseudo-twelve-stage phaser.
	P1:		PHASER 1/2 are connected in parallel.
	P2:		PHASER 1/2 are connected in parallel, and their LFOs are synchronized (Stereo mode).
	P3:		PHASER 1/2 are connected in parallel, and their LFOs are synchronized in opposite phase (Stereo mode).

NOTE: If P2 or P3 is selected, the speed is adjusted by the SPEED 1 (value knob 2).

6. TEXTREM

This models an legendary tremolo circuit. You can adjust the SPREAD setting to produce a panning effect that extends to left and right.

[1] "DEPTH"	0.0–10.0	*	Adjusts the tremolo depth.
[2] "SPEED"	1.0–10.0[Hz]	*	Adjusts the tremolo speed.
[4] "SPREAD"	0.0–10.0		Adjusts the left/right spaciousness.
[5] "LEVEL"	1.0–10.0	*	Compensates the output level.

7. ROTARY

This models a stereo rotary speaker. When you adjust the speed, it will take a certain amount of time for the specified speed to be reached – just like on an actual rotary speaker. This is because it takes several seconds for the motor that creates the rotation to accelerate or decelerate.

[1] "DEPTH"	0.0–10.0	*	Adjusts the modulation depth.
[2] "SPEED 1"	0.1–10.0[Hz]	*	Adjusts the rotational speed of the speaker. If you assign "ROT SPD" to the CONTROL switch, this will be the SLOW speed. This knob is effective even if you're not using the CONTROL switch. (p.44 Control switch settings)
[4] "SPEED 2"	0.1–10.0[Hz]	*	Adjusts the rotational speed of the speaker. If you assign "ROT SPD" to the CONTROL switch, this will be the FAST speed. This knob will not function if you're not using the CONTROL switch. (p.44 Control switch settings)
[5] "ACCEL"	1.0–10.0	*	Adjusts the time it takes for the rotational speed to change. With higher settings, the change will take more time.
CONTROL switch ROT SPD			If you select "ROT SPD" as the CONTROL switch setting, the rotation speed will alternate between SLOW/FAST (SPEED 1/ SPEED 2) each time you press the CONTROL switch. This lets you control the effect just as on an actual rotary speaker. (p.44 Control switch settings)

8. PITCH SHIFTER (PITCH)

This is a pitch shifter with a range of two octaves up or down, rivaling sophisticated rack-mounted signal processors.

[1] "PITCH"	–24–+24	*	Adjusts the pitch in semitone steps.
[2] "FINE"	–50–+50	*	Adjusts the pitch in one-cent units.
[3] "TRACKING"	10–150 [ms]		Adjusts the tracking of the pitch shifter (i.e., how closely it will follow). Shorter settings are effective if the PITCH setting is close to 0, and longer settings are effective if the PITCH setting is close to +/–24. While listening to the pitch-shifted sound, adjust this so that playing is easier.
[4] "DIRECT"	0.0–10.0	*	Adjusts the level of the direct sound.
[5] "EFFECT"	0.0–10.0	*	Adjusts the level of the effect.

NOTE: If you assign the PITCH knob to the expression pedal, you can use the pedal to control the pitch change. (p.41 Using the expression pedal to control parameters)

9. RANDOM STEP FILTER (RND FILT)

This filter randomly changes the peak frequency.

[1]	"DEPTH"	0.0–10.0	*	Adjusts the modulation depth.
[2]	"SPEED"	0.1–10.0[Hz]	*	Adjusts the modulation speed.
[3]	"MANUAL"	1.0–10.0	*	Adjusts the center frequency.
[4]	"RESO"	0.0–10.0	*	Adjusts the amount of resonance.
[5]	"MIX"	0.0–10.0	*	Adjusts the mix level of the effect.

10. FILTRON

This is an envelope controlled filter – a filter that opens and closes according to the bass input. By assigning the MANUAL knob to the expression pedal you can simulate Korg's classic TRAVELER pedal.

[1]	"DEPTH"	0.0–10.0	*	Adjusts the depth of the effect.
[2]	"ATTACK"	1.0–10.0	*	Adjusts the speed of response.
[3]	"MANUAL"	1.0–10.0	*	Sets the cutoff frequency. If DEPTH is set to 10, MANUAL will not function.
[4]	"RESO"	0.0–10.0	*	Adjusts the amount of resonance.
[5]	"SENS/POL"	0u–10u, 0d–10d		Adjusts the sensitivity of response to the bass volume.

NOTE: If you assign the expression pedal to the MANUAL knob, the DEPTH (value knob 1) will have no effect.

11. TALK MOD

This is a envelope-controlled talking modulator that varies the character of the "voice" according to the input of your bass.

[1]	"DEPTH"	0.0–10.0	*	Adjusts the depth of operation.
[2]	"ATTACK"	1.0–10.0	*	Adjusts the speed of response.
[3]	"MANUAL"	1.0–10.0	*	Adjusts the vocal character. If DEPTH is set to 10, MANUAL will not function.
[4]	"TYPE"	"A-E"–"O-U"		Selects one of the following transitions between vowels. 'A'-'E', 'A'-'I', 'A'-'O', 'A'-'U', 'E'-'I', 'E'-'O', 'E'-'U', 'I'-'O', 'I'-'U', 'O'-'U'
[5]	"SENS/POL"	0u–10u, 0d–10d		Adjusts the sensitivity of response to the bass volume, and the direction of movement.

HINT: If you assign the MANUAL knob to the expression pedal, you'll be able to control the vowel sound from the pedal. In this case, DEPTH (value knob 1) will have no effect.

E. DELAY EFFECTS

Here you can select one of 11 delay-type effects.

*: This indicates a parameter that you can control from the expression pedal.

1. ECHO PLUS

This models one of the most respected analogue tape echo machines ever made. In the original, the "echo" is produced by a playback head and the exact "delay time" is set by varying the motor speed. Many professionals prefer these "lo-fi" units because of the warm, dark echoes they produce.

[1]	"TIME"	26–2700[ms]	*	Sets the delay time.
[2]	"FEEDBACK"	0.0–10.0	*	Adjusts the amount of feedback.
[3]	"TONE"	1.0–10.0	*	Adjusts the tone of the delay.
[4]	"LO DAMP"	0.0–10.0	*	Adjusts the amount of low-frequency attenuation.
[5]	"MIX"	0.0–10.0	*	Adjusts the mix amount of the delay.

2. MULTI HEAD (MULTI HD)

This is a model of a tape echo unit boasting three playback heads. The echo from each head (A, B, C) has its own feedback loop, letting you create warm and complex "multitap" echo effects.

[1]	"TIME"	1–2700[ms]		Sets the delay time.
[2]	"FEEDBACK"	0.0–10.0	*	Adjusts the amount of feedback.
[3]	"TONE"	1.0–10.0	*	Adjusts the tone of the delay.
[4]	"MODE"			Specifies the combination of heads that will be used.
		1:		Use one head (C).
		2:		Use two heads (A, B).
		3:		Use two heads (B, C).
		4:		Use two heads (A, C).
		5:		Use three heads (A, B, C).
[5]	MIX	0.0–10.0	*	Adjusts the mix amount of the delay.

3. ANALOG DELAY (ANLG DL)

This models an analog delay that used a bucket-brigade device (BBD) instead of a tape mechanism and was known for its compactness and reliability. It is characterized by a warmly distorted sound.

[1]	"TIME"	1–2700[ms]	*	Sets the delay time.
[2]	"FEEDBACK"	0.0–10.0	*	Adjusts the amount of feedback.
[3]	"TONE"	1.0–10.0	*	Adjusts the tone of the delay.
[5]	"MIX"	0.0–10.0	*	Adjusts the mix amount of the delay.

4. MOD DELAY (MOD DLY)

This models Korg's first digital delay, the SDD-3000. You can also use this to produce chorus or flanger-like effects by setting a short TIME and using the LFO to modulate it.

[1]	"TIME"	3–2700[ms]	*	Sets the delay time.
[2]	"FEEDBACK"	0.0–10.0	*	Adjusts the amount of feedback.
[3]	"TONE"	1.0–10.0	*	Adjusts the tone of the delay.
[4]	"SPEED"	0.1–10[Hz]	*	Adjusts the modulation speed.
[5]	"MIX"	0.0–10.0	*	Adjusts the mix amount of the delay.

5. SWEEP DELAY (SWEEP DL)

This also models the SDD-3000. Here you can use the envelope of your bass signal to control the DELAY TIME, and by setting a short TIME and raising the FEEDBACK you can produce a distinctive flanger effect. Even with conventional settings of TIME, you can produce unique effects that would not be possible with an LFO.

[1]	"TIME"	26–2700[ms]	*	Sets the delay time.
[2]	"FEEDBACK"	0.0–10.0	*	Adjusts the amount of feedback.
[3]	"TONE"	1.0–10.0	*	Adjusts the tone of the delay.
[4]	"SENS"	0.0–10.0	*	Adjusts the sensitivity at which the effect responds to the volume of your bass.
[5]	"MIX"	0.0–10.0	*	Adjusts the mix amount of the delay.

6. 2TAP DELAY (2TAP DLY)

This is a multi-tap delay that models the Korg DL8000R digital multi-tap delay unit. Two delays with differing delay times are assigned to L and R, turning a mono input into stereo. This can also be used as a ping-pong delay.

[1]	"TIME"	1–2700[ms]		Sets the delay time.
[2]	"FEEDBACK"	0.0–10.0	*	Adjusts the amount of feedback.
[3]	"TONE"	1.0–10.0	*	Adjusts the tone of the delay.
[4]	"TAP TIME"	0.0–10.0		Specifies the right delay time as a proportion of the left delay time.
[5]	"MIX"	0.0–10.0	*	Adjusts the mix amount of the delay.

7. CROSS DELAY (CROSS DL)

This models a Korg DL8000R delay unit set to cross-feedback between L→R and R→L.

[1]	"TIME"	1–1350[ms]		Specifies the delay time.
[2]	"FEEDBACK"	0.0–10.0	*	Adjusts the amount of feedback.
[3]	"TONE"	1.0–10.0	*	Adjusts the tone of the feedback.
[4]	"DUCKING"	0.0–10.0	*	Adjusts the sensitivity of ducking relative to the volume of the bass.

HINT: "Ducking" is an effect that automatically lowers the volume of the delay sound when you play your bass loudly; this lets the phrase you play come through more clearly.

[5]	"MIX"	0.0–10.0	*	Adjusts the mix level of the delay.

8. RHYTHM DELAY (RHYTM DL)

This provides a DL8000R function in which the TIME of two DELAY taps is automatically set according to the RHYTHM you specify.

[1]	"TIME"	1–2700[ms]		Sets the delay time.
[2]	"FEEDBACK"	0.0–10.0	*	Adjusts the amount of feedback.
[3]	"TONE"	1.0–10.0	*	Adjusts the tone of the delay.
[4]	"RHYTHM"	1, 2, –11		Specifies the two-tap rhythm delay when the delay time is set to quarter-note timing. For some settings, only one tap is used.
[5]	"MIX"	0.0–10.0	*	Adjusts the mix amount of the delay.

9. HOLD DELAY (HOLD DLY)

If you assign "HOLD DLY" to the CONTROL switch, you'll be able to hold the delay delayed sound.

[1]	"TIME"	1–2700[ms]		Sets the delay time.
[2]	"FEEDBACK"	0.0–10.0	*	Adjusts the amount of feedback.
[3]	"TONE"	1.0–10.0	*	Adjusts the tone of the delay.
[5]	"MIX"	0.0–10.0	*	Adjusts the mix amount of the delay sound.
CONTROL switch		HOLD DLY		If you select "HOLD DLY" for the CONTROL switch, the delay sound will be held when you turn on the switch.

HINT: When you select HOLD DELAY, the control switch will automatically be assigned to HOLD DLY.

10. REVERSE DELAY (REVRS DL)

This is a DIGITAL DELAY that plays the delayed sound backwards. You can get some really cool results by playing long notes in a legato fashion.

[1]	"TIME"	26–2700[ms]		Sets the delay time.
[2]	"FEEDBACK"	0.0–10.0	*	Adjusts the amount of feedback.
[3]	"TONE"	1.0–10.0	*	Adjusts the tone of the delay.
[5]	"MIX"	0.0–10.0	*	Adjusts the mix balance between the delay sound and direct sound. With a setting of 10 you will hear only the delay effect.

11. FREEZ

This effect assigns FREEZ to the CONTROL switch. When you press the CONTROL switch, the sound you had been playing just before that moment will be held. While this sound is being held, the direct sound will not be output. Press the CONTROL switch once again to release the effect.

[1]	"TIME"	1–2700[ms]		Specifies the freeze length.
[5]	"MIX"	0.0–10.0	*	Adjusts the mix level of the freeze effect.
CONTROL switch		FREEZ		If you select "FREEZ" for the CONTROL switch, the FREEZ function will be turned on when you turn on the switch.

HINT: When you select FREEZ, the control switch will automatically be assigned to FREEZ.

F. REVERB EFFECTS

Here you can select one of 11 reverb-type effects.

*: This indicates a parameter that you can control from the expression pedal.

The parameters of the reverb effect are the same for all types.

[1]	"TIME"	1.0–10.0	*	Sets the reverb time. The relation between this setting and the actual length of reverberation will differ depending on the reverb type.
[2]	"LO DAMP"	0.0–10.0	*	Adjusts the attenuation of the low-frequency range.
[3]	"HI DAMP"	0.0–10.0	*	Adjusts the attenuation of the high-frequency range.
[4]	"PRE DLY"	0–70[ms]		Sets the initial delay before the reverberation begins. By adjusting this setting you can clarify the definition of the original sound.
[6]	"MIX"	0.0–10.0	*	Adjusts the mix amount of the reverb.

NOTE: This table applies to the following 11 reverb effects.

1. SLAP

This models the reverb of a very small space with short reverberation.

2. SPRING

This models a spring reverb unit that produces reverberation using a vibrating spring.

3. BOUNCE

This models a spring reverb that produces a higher-density reverberation.

4. PLATE

This models a type of reverb unit that works by vibrating a metal plate instead of a spring. It is adjusted to a fairly short reverb time. This reverberation is characterized by a rapid attack, and is suitable for percussive playing.

5. GARAGE

This reverb models the dense reverberation typical of a garage.

6. CHAMBER

This reverb model was captured by placing a speaker and mic in an echo chamber (a specially-designed room used in the past by recording studios). This model reproduces the reverberation of a mild-sounding echo chamber.

7. CANYON

This reverb model produces the type of reverberation that is characteristic of a canyon.

8. ROOM

This models the reverberation of a typical room, with numerous early reflections.

9. STUDIO

This models the reverberation of a large room.

10. HALL

This models the reverberation of a concert hall with numerous echoes.

11. ARENA

This models a concert hall with smooth and dense reverberation.

Using the expression pedal to control parameters

EXPRESSION PEDAL SETTINGS

EXPRESSION TARGET QUICK ASSIGN

Here's a very easy and convenient way to set the expression target.

As an example, use the MODULATION selector to choose PITCH SHIFTER. So that the effect will be easy to hear, we'll initialize the PITCH SHIFTER. If PITCH SHIFTER is already selected, turn the selector to choose a different effect, and then re-select PITCH SHIFTER.

When you're editing PITCH SHIFTER, turn value knob 1 or use the ◄/► buttons to make the name display show PITCH; the icon will appear. If in this state you press and hold (for one second) the EXP/CTL button, the name display will indicate COMPLETE. The PITCH parameter has now been assigned to the expression pedal, letting you control the amount of PITCH SHIFT. At this time, the EXP icon will appear in the LCD display. If you want to make more detailed settings, you can press the EXP/CTL button and set the minimum value ("EXP MIN," value knob 2) and maximum value ("EXP MAX," value knob 3) of the target range.

NOTE: If you change the effect type of a parameter that is assigned to the expression target (i.e., to be controlled by the expression pedal), the target will be initialized to a setting of "--OFF--". (However, "D/INPUT", "R/INPUT" are exceptions.)

HINT: If you've selected "VOX WAH" as the pre-effect type, "P/MANUAL" (wah position) is automatically assigned to the expression pedal. In this case if you change the pre-effect back to another type without performing any other operation, the Target, Min, and Max settings will automatically revert to their previous state. However if a pre-effect parameter was the target, it will be set to "--OFF--" rather than revert to its previous state.

NOTE: When you change the expression target, the MIN and MAX values will be initialized.

SETTING THE EXPRESSION TARGET

Here are the items you can set.

When you've pressed the EXP/CTL button to make it blink, you'll be able to set the following items by turning value knobs 1–3.

"*/######":	EXP expression target (value display indicates EP)	Value knob 1
"EXP MIN":	EXP (expression pedal) target range (minimum value)	Value knob 2
"EXP MAX":	EXP (expression pedal) target range (maximum value)	Value knob 3

NOTE: You can set the above items individually for each program. If you switch to a different program or turn off the power without saving, any changes you've made will be lost.

Using the same example we described earlier when explaining Quick Assign, here's how to assign the expression pedal to control the PITCH parameter of the PITCH SHIFTER modulation effect.

1. Use the MODULATION selector to select PITCH SHIFTER. If PITCH SHIFTER is already selected, turn the selector to choose a different effect, and then re-select PITCH SHIFTER.

NOTE: If you change the effect type of a parameter that is assigned to the expression target, the target will be initialized to a setting of "--OFF--". (However, "D/INPUT", "R/INPUT" are exceptions.)

HINT: If you've set the Pre-effect type to "WAH," the "P/MANUAL" (wah position) will automatically be assigned to expression. If you then set the Pre-effect to a different type without making any further settings, the target setting will also automatically return to the former setting.

2. Press the EXP/CTL switch.

3. Either press the (R) switch or turn value knob 1 to make the value display indicate "EP."

4. Use the ▲/▼ buttons or turn value knob 1 to make the name display read "M/PITCH". The PITCH parameter of the PITCH SHIFTER effect has now been assigned to the expression pedal. Also, the  icon will appear in the LCD display.

NOTE: Unlike other parameters, PITCH is not edited when you control it from the expression pedal. This is so that the pitch will change smoothly even when MIN and MAX are set to values that are close to each other (i.e., when you've made settings so that the pedal produces only a small amount of pitch change).

NOTE: Nothing will be controlled if the target effect is "--OFF--."

The expression pedal target is indicated as follows.

"*/######"

*: Target category

######: Target parameter

- **Examples**

"--OFF--"	--- OFF	(controls nothing)
"VOLUME"	---	Volume pedal
"P/DIRECT"	---	DIRECT (mix amount of original sound) for a pre-effect (e.g., OCTAVE)
"M/SPEED"	--- (*: M (modulation))	SPEED of a modulation effect
"D/INPUT"	--- (*: D (delay))	Input level of a delay effect
"R/MIX"	--- (*: R (reverb))	MIX (mix amount of reverb sound) of a reverb effect
"A/GAIN"	--- (*: A (drive/amp))	GAIN of drive/amp model

In addition to the examples we've shown here, a wide variety of expression targets provided for each effect model can be freely assigned to the expression pedals.

If desired, you can make more detailed settings.

NOTE: For "--OFF--", "VOLUME", "M/PITCH", "D/INPUT", and "R/INPUT", operating the expression pedal does not edit the parameter.

5. Turn value knob 2 to make the name display read "EXP MIN." Here you can specify the PITCH value for when the pedal is at the minimum position (pedal back). Use value knob 2 or the ▲/▼ buttons to adjust the setting.
6. Turn value knob 3 to make the name display read "EXP MAX." Here you can specify the PITCH value for when the pedal is at the maximum position (pedal forward). Use value knob 3 or the ▲/▼ buttons to adjust the setting.

   When you operate the expression pedal, the target parameter will change within the range you specified here.

   NOTE: When you change the expression target, the MIN and MAX values will be initialized.
7. Press the EXIT switch to return to the mode you were in.

   NOTE: The changes you make will not be preserved in the internal memory unless you store the program.

CONTROL SWITCH SETTINGS

You can make the following control switch settings independently for each program. Press the EXP/CTL button and use value knob 5 to select the effect you want to control.

SWITCHING EACH EFFECT ON/OFF

- "I/ON OFF" External effect insertion on/off
- "P/ON OFF" Pre-effect on/off
- "A/ON OFF" Drive/Amp model on/off
- "M/ON OFF" Modulation effect on/off
- "D/ON OFF" Delay effect on/off
- "R/ON OFF" Reverb effect on/off

NOTE: The CONTROL switch LEDs indicate the on/off status.

USING TAP TEMPO TO SET A PARAMETER

- "MOD TAP" Use TAP TEMPO to set the SPEED parameter of the modulation effect
- "DLY TAP" Use TAP TEMPO to set the TIME parameter of the delay effect

NOTE: The CONTROL switch LED will blink at the tempo you specify.

NOTE: The maximum tap interval is 10 seconds.

EFFECT CONTROL

- "FLN TRIG" LFO START TRIGGER of the CLASSIC FLANGER effect
- "ROT SPD" SPEED SW of the ROTARY effect
- "HOLD DLY" HOLD of the HOLD DELAY effect
- "FREEZ" ON of the FREEZ effect

NOTE: If you haven't selected an applicable effect, nothing will be controlled.

HINT: When you set the delay effect type to "HOLD DELAY" or "FREEZ," the control switch will automatically be assigned to "HOLD DLY" or "FREEZ." In this case, the target will automatically return to its original setting if you change the delay effect to another type without performing any other operation.

CONTROLLING ESS

- "ESS CTL1" Turn ESS on/off
- "ESS CTL2" Turn the effect being controlled by ESS on/off
- "ESS TAP1" Use tap tempo to specify the duration until the next step
- "ESS TAP2" Use tap tempo to specify the length from step 1 until the last step (if in Alternate mode, the length of one cycle back to step 1)
- "ESS TRIG" The sequence will begin from step 1

NOTE: ESS TAP1, ESS TAP2, and ESS TRIG will do nothing if the SPEED of the step effect is set to PEdL.

NOTE: ESS CTL2, ESS TAP1, ESS TAP2, and ESS TRIG will do nothing if ESS is turned off.

NOTE: For ESS TAP1 and ESS TAP2, the CONTROL switch LED will blink at the specified tempo.

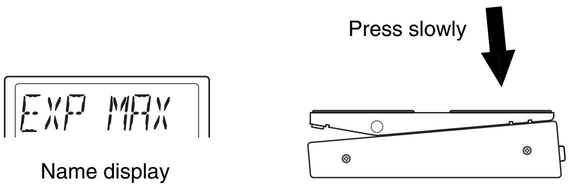
NOTE: The maximum tap interval is 10 seconds.

ADJUSTING THE SENSITIVITY OF THE PEDAL

If you notice that advancing the AX3000B's expression pedal does not reach the full effect or volume even when the Min and Max parameters are set to the minimum and maximum settings, or that returning the expression pedal does not reach the minimum effect or volume, you will need to perform the following adjustment so that the AX3000B's expression pedal will be able to reach its full range of operation.

NOTE: When adjusting the sensitivity, you should use your hand to operate the pedal. Accurate adjustment may not be possible if you use your foot.

1. Turn the power OFF.
2. While holding down the EXP/CTL button and the ▲ button, turn the power on. The name display indicates EXP MAX.
3. Slowly return the expression pedal toward yourself (pedal back), and take your hand off the pedal when it stops.



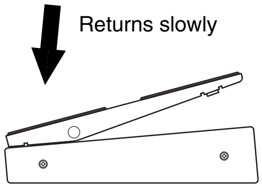
NOTE: If you decide to cancel the calibration procedure, press the EXIT button.

4. Press the WRITE button. The name display indicates EXP MIN.

5. Slowly advance the expression pedal away from yourself (pedal forward), and take your hand off the pedal when it stops.



Name display

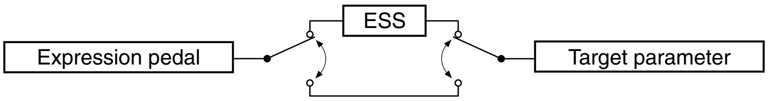


6. Press the WRITE button.
The name display will indicate COMPLETE for one second, and then the AX3000B will return to normal operation.
If the sensitivity could not be adjusted correctly, the name display will indicate ERROR, and will then continuously indicate EXP MAX. Repeat the procedure from step 3.

NOTE: If you are still unable to adjust the sensitivity after repeated attempts, it is possible that the AX3000B has malfunctioned. Please contact a nearby dealer.

Using ESS to control a parameter

ESS (Expression Step Sequencer) controls a variety of effect parameters in a stepwise fashion, letting you control your sound in completely new ways. For example, you can use the step sequencer to control the SPEED parameter of a modulation effect to create complex modulation that would not have been possible until now. You can control the MANUAL parameter of the VOX WAH or FILTRON effects to produce stepped-wah sounds, or control the PITCH of the PITCH SHIFTER effect to create arpeggio-like effects.



The AX3000B's ESS function operates between the expression pedal and the target parameter you specify. When you activate ESS, the sequencer will control the target parameter that you specified for the expression pedal, and the expression pedal will control the ESS.

ESS PARAMETERS

[1]	"SPEED"	PEdL, 0.5–100	Adjusts the speed of the sequencer. Higher values produce faster speeds. If you select PEdL, you'll be able to use the pedal position to switch steps.
[2]	"SMOOTH"	0.0–10.0	Specifies the smoothness of the steps. Lower values will cause the parameter to change abruptly, and higher values will make the parameter change smoothly.

[3] "STEPMODE" 2-F, 3-F,,,2-A,,,2-A.,,,2-r,,,2-F1,,,2-A1,,,2-A.1,,,8-A.1

(LAST STEP-MODE) — Indicates the number of steps and what will happen after the last step.

"*-#(1)" The display indicates *: LAST STEP number, #: Mode, 1: 1-shot.

<Examples>

4-F (4 step forward)	Repeatedly advance from step 1 to step 4 . (12341234 ... etc.)
4-A (4 step alternate)	Repeatedly advance from step 1 to step 4 and then back to step 1. (1234321234321 ... etc.)
4-A. (4 step alternate 2)	Repeatedly advance from step 1 to step 4 and then back to step 1. (123443211234 ... etc.)
4-r (4 step random)	Randomly select a step 1 through 4. (241324122 ... etc.)
4-F1 (4 step forward,1-shot)	Advance from step 1 to step 4, and then stop. (1234)
4-A1 (4 step alternate, 1-shot)	Advance from step 1 to step 4, then back to step 1 and stop. (1234321)

	4-A.1 (4 step alternate 2, 1-shot)	Advance from step 1 to step 4, then back to step 1 and stop. (12344321)

HINT: In the ESS display, a corresponding number of LEDs 1–8 will light green to indicate the last step you specify here.

NOTE: If you selected a “1 shot” mode (“*-#1”), the parameter will return to the value specified by the setting of the effect when the steps have been completed.

[4], [5]	“STEP” 1–8	Use value knob 4 to specify the step that you want to edit, and use value knob 5 to specify the value at that step.

HINT: When setting the STEP, you can use the ◄/► buttons to move through steps 1–8, and the ▲/▼ buttons to edit the value at each step.

Specifying the target parameter controlled by ESS

Specify the target parameter controlled by ESS in the same way that you specify the target parameter controlled by the expression pedal.

HINT: For details, refer to “Expression pedal settings” on p.40.

If a target parameter is already assigned to the expression pedal, that target parameter will be controlled (by the sequencer).

Example ESS settings

In this example, we’ll assume that you’ve made expression pedal settings to assign the PITCH parameter of the PITCH SHIFTER as the target parameter. Before you continue, assign the PITCH parameter of the PITCH SHIFTER as the target parameter for the expression pedal (see p.40).

1. Press the EXP STEP SEQ button to activate ESS.
2. Set value knob 1 SPEED to PEdL; this will stop the sequencer.
3. Use value knob 3 to specify how the sequencer will operate. For this example, choose “8-A.” so that the sequencer will cycle through steps 1–8 and then 8–1.
4. Specify the value for each step. First use value knob 4 to set STEP to 1, and then use value knob 5 to specify a VALUE of 0.
5. Repeat the above action for each step 2 through 8, and set these steps to values of 2, 4, 5, 7, 9, 11, and 12 respectively.
6. When you’ve finished making settings, try turning value knob 4. Relative to the pitch of your bass sound, the pitch will change in a sequence of C, D, E, F, G, A, B, and C.
7. Use value knob 1 to adjust the SPEED; the sequencer will run. The eight ESS display LEDs located at the left of the pedal will light red in synchronization with the sequencer.

8. As appropriate for the SPEED setting, adjust the SMOOTH setting (value knob 2) to specify how smoothly the steps change.

   HINT: Use the expression pedal to control the speed of the sequencer. If the SPEED parameter is set to PEdL, you can use the expression pedal to control the step.

   HINT: If you advance the expression pedal all the way forward to press the switch located underneath the pedal, the effect assigned to the target parameter will be switched on/off.

When you've finished making settings, save (write) the program.
To specify the MIN and MAX settings of the sequence speed controlled by the expression pedal, activate ESS and press the EXP/CTL button; then use MIN-SPEED (value knob 2) and MAX SPEED (value knob 3) to specify the minimum and maximum settings.

Using the control switch to operate ESS

You can use the control switch to control ESS operations such as start and stop. To do so, press the EXP/CTL button, and use value knob 5 to select one of the following ways in which the control switch will control the ESS.

- "ESS CTL1" Turn ESS on/off
- "ESS CTL2" Turn the effect being controlled on/off
- "ESS TAP1" Use tap tempo to specify the time to the next step
- "ESS TAP2" Use tap tempo to specify the time from step 1 to the last step
- "ESS TRIG" Start the sequence from step 1

NOTE: ESS TAP1, ESS TAP2, and ESS TRIG will have no effect if the ESS SPEED parameter is set to PEdL.

NOTE: ESS CTL, ESS TAP1, ESS TAP2, and ESS TRIG will have no effect if ESS is turned off.

NOTE: For ESS TAP1 and ESS TAP2, the CONTROL switch LED will blink at the specified tempo.

NOTE: The maximum tap interval is 10 seconds.

NOTE: If you've selected ESS CTL1 (or CTL2), and LAST STEP-MODE is 1-shot ("*-#1"), the sequence will begin from step 1 each time you press the control switch, and ESS (or the corresponding effect) will automatically turn off when the last step is completed. If you press the control switch while the steps are still proceeding, the sequence will re-start from step 1.

NOTE: If you've selected ESS TAP1 or ESS TAP2, and LAST STEP-MODE is 1-shot, the sequence will begin from step 1 each time you press the control switch.

Control via MIDI

MIDI stands for Musical Instrument Digital Interface, and is a world-wide standard for exchanging various types of musical data between electronic musical instruments and computers. When MIDI cables are used to connect two or more MIDI devices, performance data can be exchanged between the devices, even if they were made by different manufacturers.

The AX3000B can use MIDI to communicate in the following ways with another MIDI device. You can:

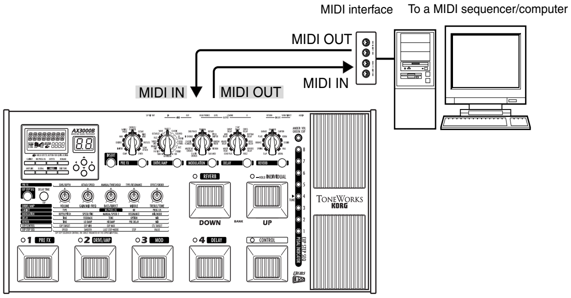
- Operate the AX3000B to switch programs on an external MIDI device, or switch the AX3000B's programs from an external MIDI device. →"Program change"
- Operate a connected optional foot controller to control an external MIDI device, or use an external MIDI device to control the AX3000B's volume or effects. →"Control change"
- Use the Sound Editor to edit parameters. →"Parameter change"
- Backup (save) and restore (load) the AX3000B program data. →"Backing up and restoring program data"

NOTE: In order to do the above things, you need to use a MIDI cable to connect the AX3000B and your external MIDI device, and set the MIDI channels appropriately. →"Connecting a MIDI device or computer," "Setting the MIDI channel"

NOTE: If your external MIDI device does not recognize certain types of MIDI messages, those messages cannot be used for control. Check the "MIDI implementation chart" of the AX3000B and of your external MIDI device.

CONNECTING A MIDI DEVICE OR COMPUTER

If you want to control an external MIDI device from the AX3000B, connect a MIDI cable from the AX3000B's MIDI OUT jack to the MIDI IN jack of your external MIDI device.
If you want to control the AX3000B from a MIDI sequencer or other external MIDI device, connect a MIDI cable from your external MIDI device's MIDI OUT jack to the AX3000B's MIDI IN jack.
When you connect the AX3000B to a MIDI sequencer or sound editor, data will normally be sent in both directions, so you will need to connect MIDI cables from the AX3000B's MIDI OUT jack to the external MIDI device's MIDI IN jack and then from the device's MIDI OUT jack to AX3000B's MIDI IN jack.



AX3000B

NOTE: You will need a MIDI interface in order to connect your computer with AX3000B.
Some MIDI interfaces are not able to transmit or receive MIDI exclusive messages correctly.

SETTING THE MIDI CHANNEL (GLOBAL "MIDI CH")

In order to exchange data with an external MIDI device, your AX3000B's MIDI channel must match the MIDI channel of your external MIDI device. Here's how to set the MIDI channel.

1. Press the GLOBAL button.
2. The name display will show "MIDI CH." If a different parameter is selected, press the ◀/▶ buttons to change the display.
3. Use the value knob 1 or the ▲/▼ buttons to set your AX3000B's MIDI channel.
4. Set the MIDI channel of your connected external MIDI device.

   HINT: For details on how to set the MIDI channel of your external MIDI device, refer to its owner's manual.

PROGRAM CHANGE (GLOBAL "PCHG OUT")

When you switch programs on the AX3000B, a program change message is transmitted from the MIDI OUT jack, causing an external MIDI device to switch programs. Similarly, when the AX3000B receives a program change message, its program will switch automatically.
Here's how you can specify whether a program change message will be transmitted from the MIDI OUT jack when you switch programs on your AX3000B.

> **NOTE:** Program change numbers not used by the AX3000B will be ignored. For details on the range of program change numbers used by the AX3000B, refer to End of this manual.

1. Press the GLOBAL button.
2. Press the ◀/▶ buttons to make the name display show "PCHG OUT."
3. Specify whether program change messages will be transmitted. Use value knob 1 or the ▲/▼ buttons to make the desired setting.

   "OFF": Program change messages will not be transmitted.
   "On": Program change messages will be transmitted.

CONTROL CHANGE (GLOBAL "CCHG I/O")

When you operate the EXPRESSION pedal, Control switch or program switches of the AX3000B, control change messages will be transmitted. This means that functions for the corresponding control change numbers on an external MIDI device can be controlled in realtime.
Similarly, when the AX3000B receives control change messages from an external MIDI device, it will be controlled in the same way as if its own foot controller were operated.
For a list of the functions that can be controlled from an external MIDI device, refer to step 4.
Here you can specify whether the AX3000B will transmit and receive control change messages.

1. Press the GLOBAL button.
2. Press the ◄/► buttons to make the name display read "CCHG I/O."
3. Specify whether all control change messages will be transmitted or received. Use value knob 1 or the ▲/▼ buttons to make your choice.
   "On" allows transmitting and receiving. "OFF" disables transmitting and receiving.

   NOTE: If this setting is "OFF," no control change messages will be transmitted or received even if you specify individual control change numbers in step 4.

4. Simultaneously press both ◄/► buttons to access the screen where you can set control numbers individually. Use the ◄/► buttons to select each controller.

   The controllers will be selected in the following order.

"EXP PDL"	Expression pedal control
"CTL PDL"	Control switch (pedal) on/off
"PRE FX"	PRE FX effect on/off
"D/AMP FX"	DRIVE/AMP effect on/off
"MOD FX"	MODULATION effect on/off
"DELAY FX"	DELAY effect on/off
"REVRB FX"	REVERB effect on/off

5. For each controller, specify whether the AX3000B will transmit and receive control change messages. If you want the AX3000B to transmit and receive messages for a controller, specify the control change number. Select a controller, and use value knob 1 or the ▲/▼ buttons to make the desired setting.

   "OFF": Control change messages will not be transmitted or received.

   "CC00"–"CC95": When you operate a controller, messages of the specified control change number 00–95 will be transmitted. Similarly, the AX3000B will be controlled when it receives messages of the same control change number from an external MIDI device.

6. To return to the screen where you specify transmit or receive for all control change messages, press both ◄/► buttons simultaneously.

PARAMETER CHANGE (GLOBAL "SYEX OUT")

When you operate the AX3000B's knobs or buttons to edit the value of a parameter, system exclusive such as parameter changes are transmitted.
If you want the AX3000B's parameters to be transmitted to an external device, turn the "SYEX OUT" setting "On." Normally, you will turn "SYEX OUT" on when using the Sound Editor.
This setting specifies whether the AX3000B will transmit parameter changes.

1. Press the GLOBAL button.
2. Press the ◄/► buttons to make the name display read "SYEX OUT."

3. Specify whether parameter change messages will be transmitted. Use value knob 1 or the ▲/▼ buttons to make your choice.

   "OFF": Parameter change messages will not be transmitted.
   "On": Parameter change messages will be transmitted.

   NOTE: When the AX3000B receives parameter changes or other system exclusive messages, its parameters, modes, or program numbers will change — regardless of the "SYEX OUT" setting.

Backing up and Restoring Program Data (GLOBAL "DUMP CUR", "DUMP ALL")

All of the AX3000B's data (including its programs) can be transmitted and received in the form of system exclusive messages. Exchanging this type of data with an external device via system exclusive messages is known as a "data dump." By performing a data dump, the AX3000B programs you created can be backed up (saved) on an external device such as a MIDI data filer or a sequencer that is able to transmit and receive system exclusive messages. Then when necessary, you can re-transmit that data back to the AX3000B to restore it. This provides a way for you to organize large numbers of programs. You can also use this method to copy program data between two connected AX3000Bs.
You can transfer program data in one of two ways; one program at a time, or all programs at once. When you transmit all programs at once, all of the AX3000B's data will also be transmitted, including Dump settings and MIDI settings.

NOTE: You can transmit data dumps regardless of the "SYEX OUT" setting. In fact, if you want to transfer program data between two AX3000Bs, we recommend that you turn the "SYEX OUT" setting "OFF." If "SYEX OUT" is "On," operating the knobs or other controls may change the parameters of the other AX3000B in unintended ways.

Backing Up

1. Connect the AX3000B's MIDI OUT to the MIDI IN of the device that will receive the data dump.
2. If you want to transmit only one program, use Program Select Mode to select the program you want to transmit.
3. Press the GLOBAL button.
4. Press the ◄/► buttons to make the name display read "DUMP CUR" or "DUMP ALL."
   "DUMP CUR" (Dump current program data): The data of the currently selected program will be dumped. If you are editing the program (and have not yet saved it), the current settings will be transmitted.
   "DUMP ALL" (Dump all data): All of the AX3000B's data will be dumped.
5. Put the receiving device in a mode in which it can record the data dump.

   NOTE: For details, refer to the owner's manual of the device that will receive the data dump.

6. Press the AX3000B's WRITE button to begin transmitting. When transmitting is completed, the display will indicate "COMPLETE," and you will return to the screen of step 4. (While "DUMP ALL" is being transmitted, the display will indicate "SEND.")

   NOTE: While data is being transmitted, do not touch the buttons or knobs of the AX3000B or its foot controller, and never turn off the power.

RESTORING

1. Connect the transmitting device's MIDI OUT to the AX3000B's MIDI IN.
2. Set the transmitting MIDI device and the AX3000B to the same MIDI channel. If the AX3000B will be receiving data that was previously transmitted to the external MIDI device, select the same MIDI channel as was used when transmitting.
3. Transmit the data dump from the external device.
   While the AX3000B is receiving all data, its display will indicate "RECEIVE." When reception has been successfully completed, it will indicate "COMPLETE." If an error occurs, the display will indicate "ERROR"; in this case, try transmitting the data again.

   NOTE: For details, refer to the owner's manual of the device that will be transmitting the data dump.

   NOTE: While data is being transmitted, don't touch the AX3000B's buttons, pedals, or knobs, and never turn off the power.

4. If you received data for a single program, select the save-destination bank and program, and save the data. (p.19)

   NOTE: The program data will not be written into the AX3000B's program memory unless you store it.

   HINT: If the AX3000B receives all data, all of its data will be overwritten automatically. However, the data currently being edited (i.e., the edit buffer) will not be affected.

Restoring the Factory Preset Programs

Here's how you can restore the AX3000B's programs and settings to the state in which it was shipped from the factory.

NOTE: Executing this procedure will erase all the programs you created and saved in the AX3000B, and will load the factory-set programs. MIDI settings will also be initialized. If there are any settings you want to keep, you should first use the data dump function to back them up, or use the "Program sheet" (the fold-out inside the back cover of this manual) to write down your settings.

1. While holding down the three buttons ▲/▼, and EXIT switch, turn on the power.
   The display will read "P" and the LED 1–4 buttons will blink, and the name display will ask "RELOAD?" Release the three buttons you were holding down.
2. If at this point you decide that you really don't want to execute this operation, you can press the EXIT switch.
3. Press the WRITE button. The name display will show "LOADING," and the factory-set data will begin being reloaded.
   When reloading has been completed, the name display will indicate "COMPLETE," and the AX3000B will automatically switch to Program Select Mode.

   NOTE: Never turn off the power while this reload operation is occurring.

Troubleshooting

If you suspect a malfunction, please check the following points first. If this does not resolve the problem, please contact your dealer or Korg authorized service center.

1. Power does not turn on

- Is the AC adapter connected to the rear panel DC9V jack?
- Is the AC adapter plugged into an AC outlet?
- Could the AC adapter be damaged?

2. There's no sound

- Is your bass turned up?
- Are both ends of your bass cable plugged into the correct jacks?
- Is your bass cable working?
- Could the rear panel OUTPUT LEVEL knob be turned down?
- Check the VOLUME, GAIN, BASS, MIDDLE, TREBLE, and PROG LVL settings. For some amp models, you may not hear any sound from the amp if the BASS, MIDDLE, and TREBLE settings are low; this is the same behavior as the circuitry of the original amp.
- Are there any effects turned down in volume?
- Could an expression pedal be at the minimum position with a parameter such as DRIVE, LEVEL assigned to it?
- Could you have activated the Mute function? Defeat the Mute function as explained in "Tuner (Bypass, Mute)" on p.21.

3. You can't hear any effects even though they're dialed in...

- Are the effect LEDs lit?
  If an LED is dark, the corresponding effect is off.
  Press the category select button to turn on the effect.
- Could the modulation "DEPTH" or the delay/reverb "MIX" be set to a low value?
  Use the category select switch to select the effect, and turn the appropriate value knobs to adjust the parameters.
- Could the effect be bypassed?
  Defeat the Bypass function as explained in "Tuner (Bypass, Mute)" on p.21.

4. Sound is distorted when using SYNTH

- Lower the DRIVE/AMP VOLUME or the PROG LVL setting.

5. The sound connected to your bass amp is distorted, or sounds wrong.

- Could "AMP/LINE" switch be set to "Ln" (LINE)?
- Could LEVEL be raised excessively?

→Make the appropriate settings as explained in "Basic connections" on p.12.

Specifications

NUMBER OF AMP TYPES: 11

NUMBER OF CABINET TYPES: 16

NUMBER OF EFFECTS

PEDAL TYPES: 11
MODULATION TYPES: 11
DELAY TYPES: 11
REVERB TYPES: 11
NOISE REDUCTION: 1

NUMBER OF PROGRAMS: 96 (24 BANKS x 4 CHANNELS)

AUDIO INPUTS

INPUT (Monaural phone jack)
INSERT RETURN (Monaural phone jack)
AUX IN (STEREO MINI)

AUDIO OUTPUTS

OUTPUT x 2 (Monaural phone jack)
INSERT SEND (Monaural phone jack)
PHONES (STEREO MINI)
LEVEL knob (adjusts OUTPUT and PHONES)
S/P DIF OUT (16-bit/44.1 kHz optical connector (IEC60958, EIJA CP-1201))

SIGNAL PROCESSING

A/D conversion: 20bit
D/A conversion: 20bit
Sampling frequency: 44.1kHz

TUNER

TUNING RANGE: A0–C7 (27.5 Hz–2093 Hz)
TUNER CALIBRATION: A = 438 Hz–445 Hz

OTHER

MIDI IN x 1, MIDI OUT x 1, DC9V x 1

Power supply: DC 9 V (included AC adapter ⊕-⊂-⊖)

Dimensions (W x D x H): 500 mm x 241 mm x 72 mm (pedal lowered) / 100 mm (pedal raised)
19.69” x 9.49” x 2.83” (pedal lowered) / 3.94” (pedal raised)

WEIGHT: 3.6 kg/7.94 lbs.

INCLUDED ITEMS: Owner’s manual, AC adapter

* Appearance and specifications of this product are subject to change without notice.

Appendix

EFFECT PARAMETERS

*: These parameters can be controlled by the expression pedal

PRE FX	SENS / DEPTH	ATTACK / SPEED	MANUAL	TYPE / RESONANCE	LEVEL / ORDER
COMP	SENS *	-	-	-	LEVEL *
LIMITER	RATIO *	ATTACK *	THRESHLD	-	LEVEL *
EXCITER	-	-	MANUAL *	TYPE	EFFECT *
WAH	TRIM	OPEN	MANUAL *	RESO *	ORDER
U-VIBE / PHASE	DEPTH *	SPEED *	MANUAL *	TYPE	ORDER
CHORUS / FLANGER	DEPTH *	SPEED *	MANUAL *	RESO *	-
OCTAVE	-	-	-	DIRECT *	EFFECT *
RING MOD	-	FILTER *	OSCFREQ *	DIRECT *	EFFECT *
FRETLESS	DEPTH *	-	-	-	-
SLOW ATTACK	-	ATTACK *	-	-	-
SYNTH	DPTH/POL	ATTACK *	WAVE *	RESO *	MIX *

DRIVE / AMP	VOLUME	GAIN / MID FREQ	BASS / DIRECT	MIDDLE	TREBLE / TONE
TUBE OD	VOLUME *	GAIN *	DIRECT *	-	TONE *
FAT DIST	VOLUME *	GAIN *	DIRECT *	-	TONE *
ORANGE DIST	VOLUME *	GAIN *	DIRECT *	-	TONE *
SHRED DIST	VOLUME *	GAIN *	BASS	MIDDLE	TREBLE
FUZZ	VOLUME *	GAIN *	DIRECT *	-	TONE *
OCTAFUZZ	VOLUME *	GAIN *	DIRECT *	-	TONE *
VALVE	VOLUME *	MID FREQ	BASS	MIDDLE	TREBLE
VALVE2	VOLUME *	MID FREQ	BASS	MIDDLE	TREBLE
CLASSIC	VOLUME *	MID FREQ	BASS	MIDDLE	TREBLE
SCOOPED	VOLUME *	MID FREQ	BASS	MIDDLE	TREBLE
LA STUDIO	VOLUME *	MID FREQ	BASS	MIDDLE	TREBLE
GOLD PANEL	VOLUME *	MID FREQ	BASS	MIDDLE	TREBLE
JAZZ	VOLUME *	MID FREQ	BASS	MIDDLE	TREBLE
STUDIO	VOLUME *	GAIN *	BASS	MIDDLE	TREBLE
AC100	VOLUME *	GAIN *	BASS	MIDDLE	TREBLE
UK MAJOR	VOLUME *	GAIN *	BASS	MIDDLE	TREBLE

CABINET	TYPE			NR	PROG LVL
	TYPE			NR	PROG LVL

MODULATION	DEPTH / PITCH	SPEED / FINE	MANUAL / SPEED 2	RESONANCE	MIX / MODE
CLASSIC CHORUS	DEPTH *	SPEED *	MANUAL *	-	MODE
MULTI TAP CHORUS	DEPTH *	SPEED *	TIME	-	MIX *
CLASSIC FLANGER	DEPTH *	SPEED *	MANUAL *	RESO *	MIX *
BI CHORUS	DEPTH *	SPEED1 *	SPEED2 *	RESO *	MODE
DUO PHASE	DEPTH *	SPEED1 *	SPEED2 *	RESO *	MODE
TEXTREM	DEPTH *	SPEED *	-	SPREAD	LEVEL *
ROTARY	DEPTH *	SPEED1 *	SPEED2 *	-	ACCEL *
PITCH SHIFTER	PITCH *	FINE *	TRACKING	DIRECT *	EFFECT *
RANDOM FILTER	DEPTH *	SPEED *	MANUAL *	RESO *	MIX *
FILTRON	DEPTH *	ATTACK *	MANUAL *	RESO *	SENS / POL
TALK MOD	DEPTH *	ATTACK *	MANUAL *	TYPE	SENS / POL

DELAY	TIME	FEEDBACK	TONE	OPTION	MIX
ECHO PLUS	TIME *	FEEDBACK *	TONE *	LO DAMP *	MIX *
MULTI HEAD	TIME	FEEDBACK *	TONE *	MODE	MIX *
ANALOG DELAY	TIME *	FEEDBACK *	TONE *	-	MIX *
MOD DELAY	TIME *	FEEDBACK *	TONE *	SPEED *	MIX *
SWEEP DELAY	TIME *	FEEDBACK *	TONE *	SENS *	MIX *
2 TAP DELAY	TIME	FEEDBACK *	TONE *	TAP TIME	MIX *
CROSS DELAY	TIME	FEEDBACK *	TONE *	DUCKING *	MIX *
RHYTHM DELAY	TIME	FEEDBACK *	TONE *	RHYTHM	MIX *
HOLD DELAY	TIME	FEEDBACK *	TONE *	-	MIX *
REVERSE DELAY	TIME	FEEDBACK *	TONE *	-	MIX
FREEZ	TIME	-	-	-	MIX *

REVERB	TIME	LO DAMP	HI DAMP	PRE DELAY	MIX
SLAP	TIME *	LO DAMP *	HI DAMP *	PRE DLY	MIX *
SPRING	TIME *	LO DAMP *	HI DAMP *	PRE DLY	MIX *
BOUNCE	TIME *	LO DAMP *	HI DAMP *	PRE DLY	MIX *
PLATE	TIME *	LO DAMP *	HI DAMP *	PRE DLY	MIX *
GARAGE	TIME *	LO DAMP *	HI DAMP *	PRE DLY	MIX *
CHAMBER	TIME *	LO DAMP *	HI DAMP *	PRE DLY	MIX *
CANYON	TIME *	LO DAMP *	HI DAMP *	PRE DLY	MIX *
ROOM	TIME *	LO DAMP *	HI DAMP *	PRE DLY	MIX *
STUDIO	TIME *	LO DAMP *	HI DAMP *	PRE DLY	MIX *
HALL	TIME *	LO DAMP *	HI DAMP *	PRE DLY	MIX *
ARENA	TIME *	LO DAMP *	HI DAMP *	PRE DLY	MIX *

Index

AX3000B

Owner's manual

KORG

Ⓔ ①

IMPORTANT NOTICE TO CONSUMERS

This product has been manufactured according to strict specifications and voltage requirements that are applicable in the country in which it is intended that this product should be used. If you have purchased this product via the internet, through mail order, and/or via a telephone sale, you must verify that this product is intended to be used in the country in which you reside.

WARNING: Use of this product in any country other than that for which it is intended could be dangerous and could invalidate the manufacturer's or distributor's warranty. Please also retain your receipt as proof of purchase otherwise your product may be disqualified from the manufacturer's or distributor's warranty.

KORG

KORG INC.

4015-2 Yanokuchi, Inagi-city, Tokyo 206-0812 Japan